

American Aviation

 The Independent Voice of American Aeronautics

OCTOBER 1, 1945

Behind the Screen

FROM NOW ON there will be much said in Congress and printed in the press about the transportation integration proposal by the Transportation Association of America.

Integration would eliminate competition between air and surface carriers and promote common ownership of all types of transportation within restricted regions.

Fortnightly Review

Air transportation being much smaller than the railroads, the airlines would be placed under the dominance of the powerful rails.

Its first result would be stultification of development. Its second result would be higher costs to shippers, passengers and taxpayers. Its third result would be government ownership.

Yet the Transportation Association of America is conducting a propaganda campaign designed to break down the traditional competitive, private ownership system under which our country has become great. It has been successful in stirring up some interest in Congress. Representative Clarence Lea has begun a general investigation of the whole transportation situation. A similar move is underway in the Senate.

Just what is the Transportation Association of America? It claims to be an organization of shippers, of taxpayers and of the travelling public. It is hurtfully resentful when it is called a "railroad front." It goes far out of its way to disclaim any connection with the railroads. But propaganda groups just don't happen. And no one is being fooled by the disclaimers.

The Association's propaganda is very similar to railroad talk. Take the assertion that the airlines are not paying their way and are using municipal ground facilities and federal airways at no cost. Its the same old story over and over again—but far away from the facts.

Senator McCarran, in introducing his federal aid airport bill September 10, pointed out that the federal government has expended more than \$3,000,000,000 for rivers and harbors, \$6,500,000,000 for highways, and more than \$800,000,000 for the development of rail transportation. The expenditures for all civil and commercial aviation are far under any of these totals, and of these expenditures only a fraction are used by the airlines.

Airlines are paying their way just as much or more
(Continued on page 6)



Republic's Vice President-Sales

Mundy I. Peale, vice president and a director of Republic Aviation Corp. has been appointed vice president in charge of all sales. Since July, 1943, Peale has headed Republic's Indiana Division plant at Evansville.

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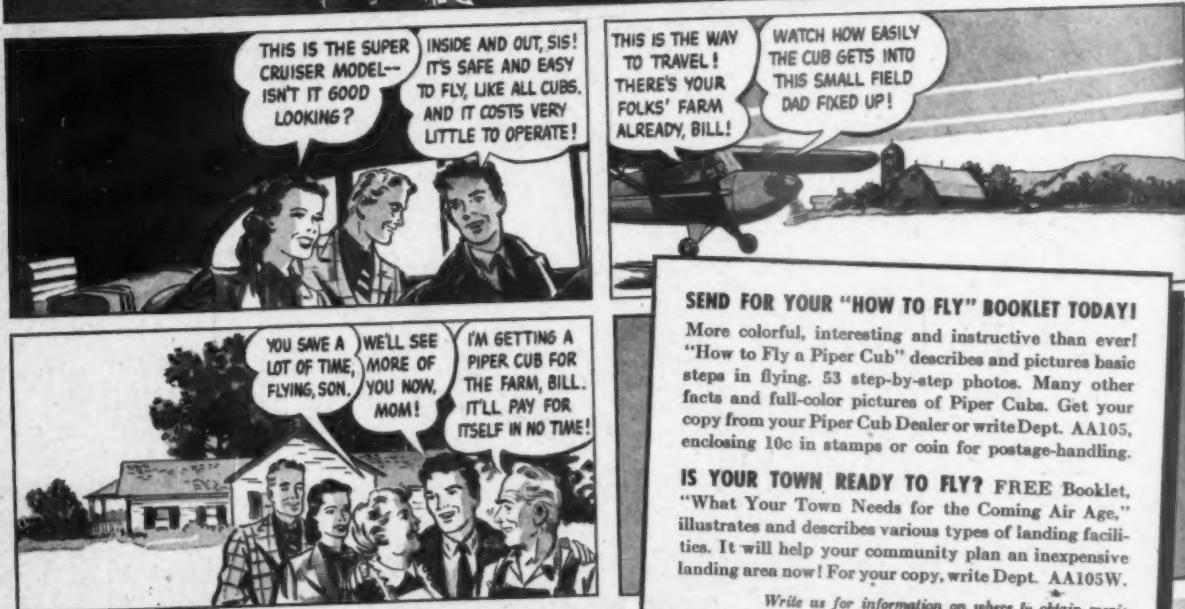
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American Aviation

Volume 9, Number 9

The Independent Voice of American Aeronautics

October 1, 1945



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International Aviation: A weekly newsletter of aviation trends and news in foreign countries. Published on Friday of each week and dispatched via first-class surface mail. Editorial representatives in foreign capitals. Subscriptions: \$100 one year (52 issues). Airmail delivery available at additional cost to cover postage. Service Bureau available to all subscribers. **FRANK M. HOLZ**, Managing Editor.

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American Aviation Traffic Guide: Monthly publication of airline schedules, rates and regulations for passenger and cargo transportation by commercial air transport. Supplements furnished subscribers covering changes occurring between issues. Subscriptions: U. S. and Latin America—\$5.00 one year (12 issues and supplements); Canada \$5.50. All other countries \$6.50. Published and revised from editorial offices at 139 North Clark Street, Chicago 2, Illinois. (Telephone: State 2154). **H. D. WHITNEY**, Managing Editor.

American Aviation Reports: Current financial and traffic statistics on all domestic airlines as reported to the Civil Aeronautics Board. Includes monthly and semi-annual summaries. Yearly subscription comprises over 500 separate reports. \$175 one year; \$100 six months; \$20 one month. Special statistical and research work for subscribers at cost.

American Aviation Book & Periodical Department: For the convenience of subscribers in ordering aeronautical books and journals in the U. S. and throughout the world. Address inquiries to American Aviation Book and Periodical Department, American Building, Washington 4, D. C.

(Continued from page 1)

than any other transportation facility. An examination of landing and other fees, and of rentals, at municipal airports will show this. The taxpayers are not losing. As for federal airways, the 400 odd airline transport planes comprise a very small segment of the over-all military and civil air traffic which depend upon the airways.

The Transportation Association of America claims that it is trying to avoid government ownership by achieving transportation integration. What folly! Integration is the first major step toward government ownership. How the user of transportation can gain through the elimination of competition is indeed a mystery yet unsolved. It has never been done yet. The airplane is bringing to the nation the fastest and best form of transportation yet invented by man. To deprive the nation of its fullest development would be tragic. Integration would make its full development impossible.

President Truman is firmly on record as being opposed to integration in his talk in Baltimore on Feb. 1, 1944. Representative Lea knows aviation well, and we trust he won't be misled by a propaganda organization with an avowed purpose of eliminating the competition which the nation needs to aid commerce, passengers, mail and shipping in general.

Caution to Veterans

IT IS NOT EASY to tell a young man who went through flight training and on into active combat far away from home and who is rightfully proud of his flying record and who likes airplanes that he is running a risk when he says he wants to open a fixed base operation in his home town when he gets out of the service.

It isn't easy to tell him because first of all he doesn't believe the warnings of caution. Chances are that he paid little attention to aviation before the war. He's been instilled with enthusiasm during the war. He has seen what the airplane can do. He likes it. He is sure that he can make a success of getting into the aviation business.

It's particularly hard to tell him because he's earned his right to go into business for himself, and because aviation is going to be built on enthusiasm, initiative and ideas.

But the road is hard and the outlook is not bright. It's a matter of percentages, really. A good many vets will open up business and make good. But not as many will succeed as think they can succeed. Being a fixed base operator is a tough business. Let the old-timers give the evidence—they know. Most of them came up the hard way and most of them will admit that the war was the one thing that put them over.

An astonishing number of airmen want to open their own businesses. They will do it on savings and government loans. But old-timers will do them a favor by giving them the facts and experiences from the past. We fear that a lot of money is going to be lost. Hopes will be dashed. In the long run aviation won't gain by a hasty and quickly-deflated boom.

Returning vets should study their prospects with cold, realistic eyes. They must be prepared to stand losses, to face discouragement, and to take some hard raps. The glamor and thrill associated with fleets of fast, powerful military aircraft will be missing. It's different when the individual has to pay for parts, maintenance, fuel, hangars, and the like. Uncle Sam won't be around. A word of caution now will save some headaches later on. Ask any old-time fixed base operator.

Why Stop at Five Cents?

IN CELEBRATION of the 25th anniversary of coast-to-coast air mail, Postmaster General Robert Hannegan told a New York aviation audience that he advocates reducing the air mail postage from eight cents to five cents.

That's fine, but why should the United States lag behind other countries of the world by continuing to charge a luxury surcharge merely for the privilege of having first class mail carried by air.

Mr. Hannegan must know by this time that air transportation is no longer a luxury. It's an accepted and commonplace method of transportation. Hardly a soldier overseas got his mail by any other way than by air. Passenger fares are now low enough for "everybody" to fly, and will trend steadily lower.

First class mail should be transported by the fastest method. This means that almost all overnight mail would go by air. There should be no surcharge. Three cents is sufficient to give the P. O. a break financially, for right now it is making a huge profit at the expense of users of air mail.

Let's give business the impetus it needs by moving all first class mail by the fastest means. Let's get that surcharge removed, for the U. S. is one of the few remaining countries of the world to force air mail patrons to pay extra for a privilege that is no longer a luxury.

Airfield on an Island

DURING the Senate debate on the airport bill, Senator Brien McMahon of Connecticut said he considered "fantastic" such features of the airport plan as building an airfield on Antelope Island in Utah where but one family and a herd of moose live. He criticized generally the building of airfields where population is sparse.

Such misunderstandings on the part of Senators is not uncommon. Airports are highways and whether there is population or not, there must be reasonably-spaced landing fields for emergency landings in the same way that highways in the Far West often traverse as much as fifty miles without passing signs of habitation. One solution is to take U. S. Senators on a private flying tour and let them see for themselves the need of many airfields. Who wants to volunteer to fly Senator McMahon to the West Coast?

WAYNE W. PARRISH.

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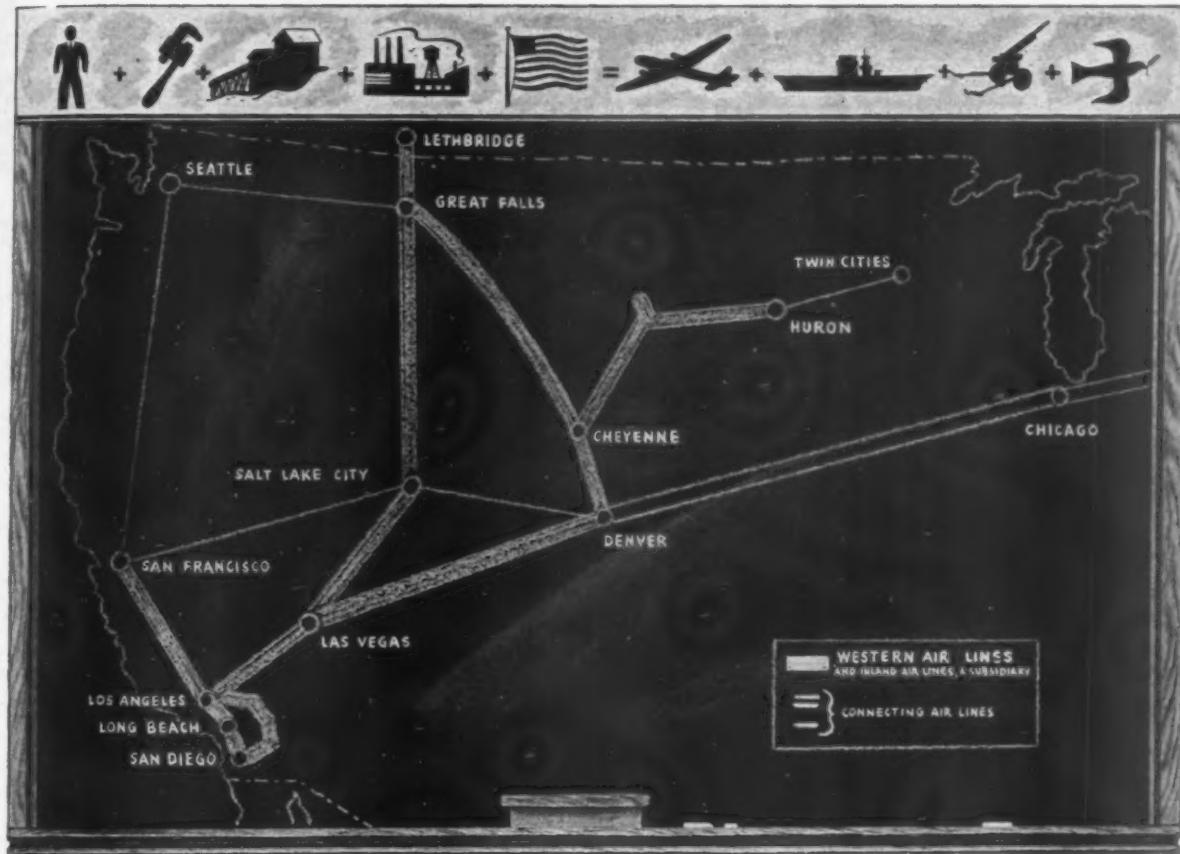
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Wings of Yesterday

Twenty-Five Years Ago

An airplane, piloted by Paul Collins, demonstrated a fire-proof paint invented by Parker H. Bradley. The flight was made at night, at Hazelhurst Field, Garden City, Long Island, and was witnessed by Air Service officials. (Sept. 28, 1920).

An outstanding flying meet was held for three days at Buc, France under the auspices of the Aero Club of France. (Oct. 8-10, 1920).

Sadi Lecointe bettered the speed record of Capt. De Romanet, who had flown a kilometer in 12.3 seconds or at a rate of about 181.95 miles an hour. Lecointe covered the kilometer in 12.1 seconds, or at the rate of 206.694, about 185 miles per hour. (Oct. 10, 1920).

Capt. W. Roy Maxwell of Hamilton, Ontario, made a pioneer flight into the isolated region of Northern Ontario. Capt. Maxwell piloted a Curtiss seaplane to the Moose Factory station of the Hudson Bay Co. (Oct. 10, 1920).

An airplane attached to the Harding-Coolidge Campaign Committee of New Jersey left Lakewood, N. J. on a flight planned to take in every county in the state. (Oct. 11, 1920).

Joseph Flannigan, a Democratic candidate for Sheriff of Queens, New York City, began his political campaign by airplane. (Oct. 12, 1920).

Fifteen Years Ago

J. K. O'Meara established the American glider duration record of six hours, forty-eight minutes, at Elmira, N. Y. (Sept. 30, 1930).

Willfred G. Moore set an altitude record for light airplanes of the first category, of 18,543 ft. at Kansas City, Mo. Moore flew an Inland Sport, Warner motored. (Sept. 30, 1930).

Pan American Airways System extended the air mail service from Cristobal, Canal Zone, to La Guaira, Venezuela. (Oct. 2, 1930).

Forty-eight persons lost their lives at Beauvais, France, when a British airship (R-101) was destroyed by fire. (Oct. 5, 1930).

Piloting a DeHavilland Moth, DeHavilland Gipsy motored, Laura Ingalls flew from New York to Los Angeles in the flying time of 30 hours, 27 minutes. (Oct. 5-9, 1930).

Capt. Errol Boyd and Lt. H. P. Connor, after being forced down on the Scilly Islands, flew from Harbor Grace, Newfoundland, to Croydon, England. Their plane was a Bellanca, Wright Whirlwind Motored. (Oct. 9, 1930).

Obituary

Admiral McCain

Vice Admiral John S. McCain, USN, a strong advocate of Naval air power and former commander of the famed Task Force 38, died suddenly Sept. 6 at his home in Coronado, Calif. He had just returned from witnessing the signing of the Japanese surrender terms aboard the U.S.S. Missouri in Tokyo Bay. McCain had learned to fly only 10 years ago, earning his wings at the age of 51 at the Navy's Pensacola air base. He later served as Chief of the Bureau of Aeronautics. Early in the war he commanded all land-based Naval aviation in the Pacific.

Edward S. Evans

Edward S. Evans, industrialist, inventor and financier, died Sept. 6 after a brief illness. President of the Evans Products Co., developers of devices for loading aircraft, freight cars and trucks, Evans was a leading transportation, manufacturing and aviation expert. He founded the National Glider Association and was the donor of the Edward S. Evans silver and bronze trophies awarded annually for gliding accomplishments. He was a former president of Lockheed Aircraft Corp. and an organizer of the Stinson Aircraft Corp. which developed successful brakes for aircraft. Evans also was a director of the early National Air Transport Co. and was president of Parks Air College in St. Louis.

FIGHTERS. By Leo White. 46 pp. Illustrated. Published by Whites Aviation Ltd., Auckland, N. Z.

This little book is the story of the Royal New Zealand Air Force fighter squadrons and their epic air battles over the Solomons in 1943-44. The author was a Flight Officer in the RNZAF and is currently the leading aviation publisher of New Zealand. It is a human document released by the RNZAF Directorate of Public Relations. Although essentially of interest to New Zealanders, it is a collection item for those building up libraries of wartime aviation books.

THE AVIATION READERS. School Textbooks. Published by The Macmillan Company, New York. Prices from \$0.72 to \$1.12.

The first six Aviation Readers for school children have now been published by The Macmillan Company, and the public schools of Chicago have adopted them for the first six grades.

There is one reader for each of the first six grades, covering everything from the men who built the first aircraft to helicopters, parachutes, private flying, and science. They seem to be well and simply written, and amply illustrated. The series consists of the following:

Straight Up, by Henry B. Lent—\$0.72; *Straight Down*, by Henry B. Lent—\$0.72; *Planes for Bob and Andy*, by Miriam Huber, Frank Salisbury and Arthur I. Gates—\$1.12; *Airplanes at Work*, by Gertrude Whipple—\$1.00; *The Men Who Gave Us Wings*, by Rose N. Cohen—\$1.06; and *Aviation Science for Boys and Girls*, by Charles K. Arey—\$1.12.

WINGS ACROSS THE WORLD. THE STORY OF THE AIR TRANSPORT COMMAND. By Hugh B. Cave. 176 pp. Illustrated. Dodd, Mead & Co., New York. \$2.50.

It is a pleasure to report the appearance of this excellent book on the Air Transport Command. Well written and easy to read, and adequately illustrated with official photographs, it is a record of one of the greatest air achievements in history.

The author starts at the beginning of World War II in September, 1939 and picks up speed with the Pearl Harbor attack and the job the airlines played in rushing ammunition, men and equipment to Alaska. Then come the organization of the ATC itself, and of its world-wide system, its aircraft, its functions, its record, and its personnel.

It is not a dry tome of factual material. It is intended as a popular book recording the highlights in language all can understand. And all who have had anything to do with ATC should be interested, for it is a book which tells of America's real entrance into global aviation.

the industry like to see in your publication. For several years, prior to December 7, 1941, United Air Lines was providing Passenger Service Weather Forecasts at all our major terminals and the main items stressed were weather conditions and temperatures at your destination. Now that the emphasis is on reconversion and weather information is no longer restricted, I think that before too long you will find United again providing this service.

HAROLD M. WHITNEY
Station Chief Meteorologist
United Air Lines

Editor's Note—Thanks to Chief Meteorologist Whitney for news that United will shortly resume passenger service weather forecasts, and a raw onion to the Editor for forgetting that United had such service in operation prior to Dec. 7, 1941.

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American Aviation Publications

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Trend of

(As compiled and edited by Clifford Guest,

Bell Aircraft Has Ideas: Short, peppy Larry Bell, founder and president of Bell Aircraft Corp., finds himself and his company in a comfortable position following cancellation of the big war contracts. Having built the company from an idea and borrowed money into a substantial firm which undertook such big projects as building B-29s at Atlanta, Bell is in a position to start out afresh on some new ideas. Best bet: he will lay his chips on the helicopter, make a big splash in this direction—and come out with some business. It is said that the company has upwards of fifteen millions in cash with which to stick in the aircraft game. Bell has proved himself to be a smart manufacturer in what is one of the most hazardous industrial fields in the nation. Not all of the aircraft companies will pull through the lean days ahead. Insiders say Bell will be one of them.

Companies with Chips: United Aircraft undoubtedly tops the list of conservative aviation companies which have planned for the lean years and have sufficient chips to stay in the game. Curtiss-Wright is No. 2 and can afford to set back and see which way the wind is blowing. But a number of others are in a position to sit in the game for awhile. Fairchild, for example, is well set. So is Northrop which LaMotte Cohn pulled into a top cash position in a short period of years. Douglas, Lockheed, Martin and Boeing all have blue chips. And Republic has made an excellent show out of a one-plane production job (P-47) and has enough blue chips to put over the Seabee amphibian and make a big try for the highly-competitive four-engined transport market.

Bendix After Foreign Markets: Although he's been with Bendix Aviation Corp. as export sales manager for less than a year, C. T. Zaoral is being rated as a new important factor in the aviation business. He's out of the world-wise automobile industry, first with Dodge and then for a long time with General Motors. Ernest Breech, Bendix president, pulled him out of automobile. Far from pessimistic, Zaoral is looking for substantial business abroad. Shrewd Charles Marcus of Bendix is still master-minding patents and foreign affairs and the company has many connections abroad. It's playing for big stakes.

American to Get ATC Men: Some of the top men in Air Transport Command are being wrapped up for service with American Airlines and American Export Airlines as soon as they leave the Army. Brig. Gen. Harold Harris, one of founders of Panagra and highly-rated in the industry, will go to AMEX. A real "find" is Col. Ed. Schroeder, formerly of United, who has been maintenance officer for ATC at headquarters—he will go with American. ATC men say he has no rival on maintenance. Another man signed up for AMEX is Col. Henry C. Kristofferson, who was operations chief for PAA's Orient Division and went with ATC when the Army took it over and is now assistant chief of staff for operations of ATC in Washington.

Larry Fritz and Luke Harris: Much speculation surrounds future plans of Brig. Gen. Larry Fritz, commanding officer of the North Atlantic Division of ATC who has had a long-time top record in air transport. He was with TWA before the war. Rumors have it that Fritz will join American, or that he will retire from aviation and take an important G.M. distributorship and sell automobiles. . . . Col. Luke Harris, who has been maintenance officer for ATC's Pacific Division, is leaving the Army to rejoin PCA after a distinguished army service.

It Started With Douglas: In paying tribute to the work of the national and regional Aircraft War Production Councils, it should not be overlooked that AWPC was born in Douglas Aircraft Company. The late President Roosevelt, it was feared, would draft Douglas or some other aircraft builder as a "czar." A. M. Rochlen and Don Douglas cooked up the idea of a co-operative industry organization embracing all aircraft presidents—and it clicked.

The News

Managing Editor, American Aviation Daily)

No Major TWA Changes: Lots of rumors have been floating around that Jack Frye would retire as president of TWA and become chairman of the board. Admittedly that's an ultimate goal, but Jack says it simply isn't true that any such move is now contemplated. Brig. Gen. T. B. Wilson will continue as chairman specializing on foreign route matters—and any talk of friction between Frye and Wilson isn't so. Only change in the offing is return of Captain Paul Richter, USNR, to the company after distinguished war service in building up Naval Air Transport Service into an excellent show. Richter will again play a top role in TWA. One of the ablest men in the business, Richter's return is most welcome to the company. The old team is getting back in harness. Date of Richter's return: about Oct. 1.

Gas Turbine Needs Push: Despite the great splurge of publicity, the jet propulsion and gas turbine programs are not getting the stimulus they need if progress is to be as rapid as predicted. General Electric, for example, which has had the early edge on the jet units, still is relegating the program to minor consideration without nearly enough facilities. Westinghouse may catch up as one of the Westinghouse execs sees the possibilities. Curtiss-Wright is on the right track; it's poorer design will probably be replaced because the engineers are following the right methods. Northrop is in the running, too. But something is lacking in what has been promised as the biggest thing on the aeronautical horizon.

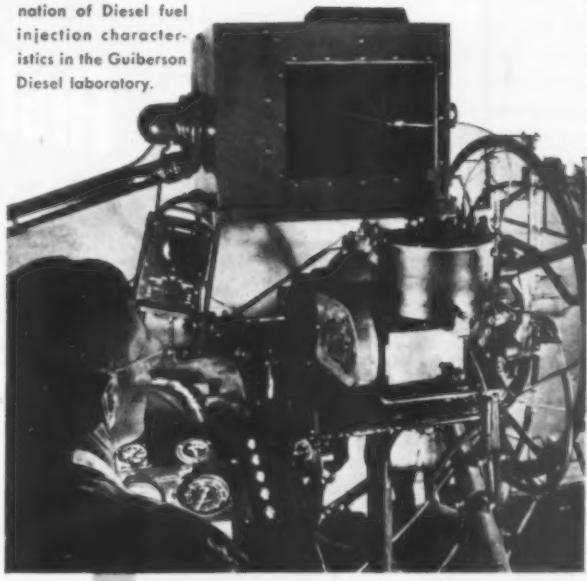
One Executive Who Types: C. R. Smith, tireless chairman of the board of American Airlines, is probably the only top executive in the air transport industry who prefers to type his own memoranda and policy-making notes. Business letters are dictated, but most letters, even, are drafted by "C. R." on one of his portable typewriters. The typing isn't good—it's by the hunt and peck system—but American executives have learned not to pass up lightly a piece of yellow copy paper that looks like a schoolboy had typed out. Since returning to American, "C. R." has typed out some potent memos.

State Changes: Sheldon "Buck" Steers, director of the Michigan Board of Aeronautics, and long time in aviation, is expected to retire to farming shortly with the forthcoming return to the directorship of Col. Floyd Evans. A high-ranking AAF man may also join the Board. Steers is now president of the National Association of State Aviation Officials. . . . Capt. Asa Rountree, Jr., who served with B-17 squadrons in England earlier in the war, will return soon to his post as director of aeronautics for Alabama.

Short Notes on Aviation: The 40-passenger French Latécoère 631 flying boats, specially equipped for non-stop transport of passengers over the North Atlantic, was scheduled to land at La Guardia Field about the time this issue went to press. . . . John Hertz, board member of Consolidated-Vultee, is advocating a Drive-Your-Plane service for all sizeable airports, similar to the Hertz Drive-Yourself automobile system. If Convair adopts such a plan, its Stinson Division would benefit considerably. . . . Government officials are trying to devise some system of reserving surplus aircraft for sale to service men delayed in foreign war theatres. Numerous letters from GI's indicate they fear most of the better equipment will be sold by the time they come home. . . . Next big headache for the aircraft manufacturers is the demand for 52 hours pay for the 40-hour week. Spearheaded by unions at Lockheed and Douglas plants, the movement already has reached the stage of definite decision to call a strike vote shortly unless the companies meet demands. . . . Such a strike would play havoc with airlines' equipment plans. . . . W. L. Jack Nelson, who was a major figure in the WTS pilot training program, has resigned as a special assistant to the CAA administrator, effective the latter part of October. He will be associated with Wade Stewart, Parkersburg, W. Va., in distributorship for the Ercoupe and other activities. . . . Small cities such as La Junta, Colo., and Burlington, Vt., where airlines have had to temporarily suspend service because of shortage of equipment are becoming highly vocal in their criticisms and the carriers are going to be subjected to a lot of harmful publicity.

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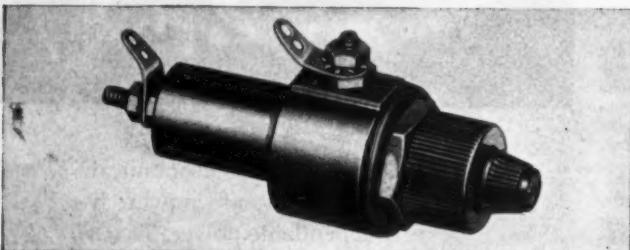
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Mid-Continent-American Plan Merger

Straight Stock Transaction Approved by Boards of Directors of Two Companies; Seek CAB Approval

Mid-Continent Airlines and American Airlines on Sept. 19 jointly announced a proposal for the consolidation of the two companies under a straight stock transaction deal. No cash considerations were involved.

Under the proposal, which goes to the Civil Aeronautics Board for approval, stockholders of Mid-Continent would receive one share of American stock for four shares of Mid-Continent. This has been approved by the boards of directors of both companies, the announcement said.

The announcement was made by C. R. Smith, chairman of the board of American, and Joseph A. Zock, chairman of the board of Mid-Continent.

Smith said the consolidation was for "the purpose of putting together two air transportation systems which logically fit together" and that the consolidation would "permit integration, better equipment routing, economy of system operation and provision of better service at lower costs." Mid-Continent personnel and facilities will be merged with American, he said.

Zock, who represents the interests of the Ryan family and others controlling more than 50% of the stock of Mid-Continent, said that the consolidation and stock transaction plans would be accepted by the stockholders he represents. Re-

mainder of the Mid-Continent stock is in scattered holdings.

J. W. Miller, Mid-Continent president, said in a letter to officers and employees of his company that the consolidation would mean an absorption of MCA personnel into American's system, and that Mid-Continent employees would retain their seniority.

Smith and Zock said that they expected CAB approval of the proposal soon "in order that the consolidation plan can be effected promptly." Absorption of MCA's system into American's would give the transcontinental carrier an additional 20 cities on its system and would bring its domestic route mileage to 10,635. Mid-Continent has 2510 route miles in its Routes 26 and 48. Present equipment includes six DC-3s and three Lockheed Lodestars.

Route 26 was awarded under a grandfather certificate, effective Aug. 22, 1938, and originally ran from Tulsa, Okla., to Minneapolis-St. Paul, via such intermediate points as Kansas City and Omaha, Neb. This route recently was extended to New Orleans, with service inaugurated Aug. 10 last.

Route 48 was certificated, effective from July 18, 1940, and operates from Minneapolis-St. Paul to Des Moines, Ia., and on to (a) Kansas City and (b) St. Louis.



Aviation Calendar

Oct. 4-5—Institute of Aeronautical Sciences light aircraft meeting, Detroit.

Oct. 15—PIACO Interim Council re-convenes in Montreal.

Oct. 16—First annual meeting, International Air Transport Association, Montreal.

Oct. 17-18—Non-Scheduled Flying Advisory Committee meeting. (Place not yet named.)

Oct. 24-25—Kansas State Airport Conference, Kansas State College.

Oct. 25—Institute of Aeronautical Sciences transport meeting, Washington, D. C.

Oct. 31-Nov. 3—National Aviation Clinic, Oklahoma City. Pre-Clinic conference Oct. 27.

Nov. 5-7—National Association of State Aviation Officials annual meeting, Coronado Hotel, St. Louis.

Nov. 15-16—Arizona State Aviation conference, Tucson, auspices Tucson Chamber of Commerce.

Nov. 19-21—National Aviation Clinic, Oklahoma City. Pre-Clinic conference Oct. 27.

Dec. 17—Wright Brothers Lecture, Institute of Aeronautical Sciences, Washington, D. C.

Jan. 4-6—All-American Air Maneuvers, Miami, Fla.

As presently set up, American's and Mid-Continent's routes would join at St. Louis (Routes 30 and 48), Joplin, Mo. (Routes 30 and 26), Tulsa, Okla. (Routes 30 and 26), and Texarkana, Ark.-Tex. (Routes 23 and 26). Thus American would have access to such new principal cities as New Orleans, Kansas City, Omaha, Des Moines and Minneapolis-St. Paul.

Mid-Continent's latest financial report, for the period ended June 30, 1945, showed a net profit of \$29,613. Net income before taxes was \$51,372 and income taxes were listed at \$21,758 for the six-months period. Passenger transportation revenues for the period were \$771,657, mail \$458,988, express and freight \$16,030 and excess baggage \$6,721, making total transportation revenues of \$1,253,397. Total operating revenues were \$1,255,740, plus non-operating income of \$50,428. Total operating expenses were \$1,224,671.

Mid-Continent's consolidated balance sheet for July, 1945, listed total assets of \$2,163,157. This included current assets of \$1,188,662, investments and special funds \$2,291, flight equipment (net book value) \$610,199, other property and equipment (net book value) \$107,953; operating property and equipment \$784,833, and deferred charges of \$187,370.

Total current liabilities were listed at \$605,920, and capital stock at \$389,398 (389,398 shares common, par \$1). Surplus was listed at \$794,665, plus these other surplus reserves—\$15,000 capital surplus; unappropriated earned surplus, \$234,152.

Boeing Announces Design For New 30-Passenger Transport

Model 431-16 Designed For Gross Weight of 36,000 lbs.

BOEING Aircraft Co., last represented in the twin-engine medium range transport field by the 247, has recently submitted proposals for a new design designated as the Model 431-16 to American Airlines and other carriers, it was learned last fortnight.

The 431-16 is a 30-passenger, high wing monoplane, designed to facilitate passenger and cargo loading and unloading, and to provide unobstructed passenger vision. Increased landing gear weight usually associated with high wing designs is avoided by retracting the single wheeled main gear into wheel wells in the fuselage, and headroom of 6 ft. above the flat floor is maintained under the wing.

The basic aircraft has a take-off gross weight of 36,000 lbs., landing gross weight of 33,800 lbs., manufacturer's weight empty of 23,751 lbs., and operating weight empty with a 3-man crew, crew baggage, buffet equipment and food, passenger service equipment, drinking and wash water and minimum operating oil of 44,623 lbs., permitting a useful load of 11,377 lbs. at take-off and 9,177 lbs. at landing. Wing area is 738 sq. ft., giving a

wing loading at take-off of 48.7 lbs./sq. ft., highest of any of the new transports yet announced. This is compensated for by a wing-flap combination of unusual aerodynamic cleanliness made possible by the fuselage retraction of the main gear and consequent small engine nacelles.

Span of the 431-16 is 96 ft., overall length 72 ft. 8 in., overall height 26 ft. 1 in., and main gear tread 17 ft. The fuselage has a maximum width of 11 ft. and a maximum height of 10 ft. 0.74 in. Floor level of both cargo hatches and passenger entrance is 44 in. above the ground.

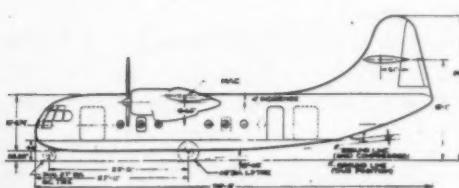
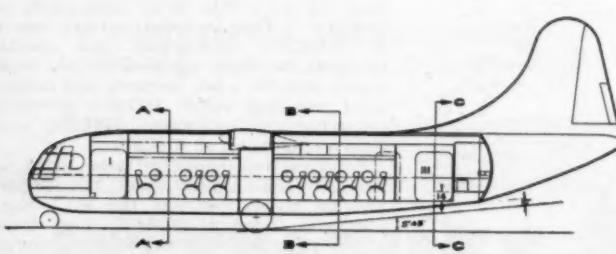
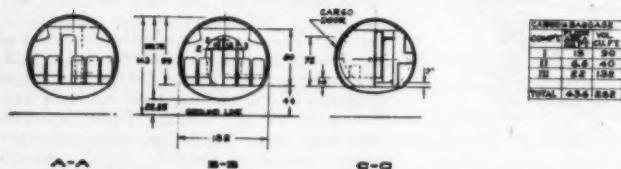
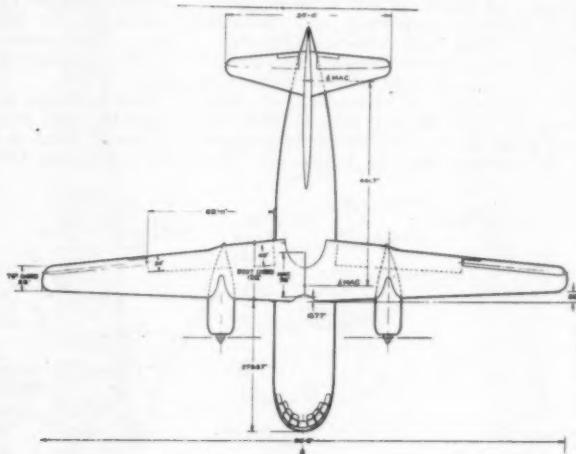
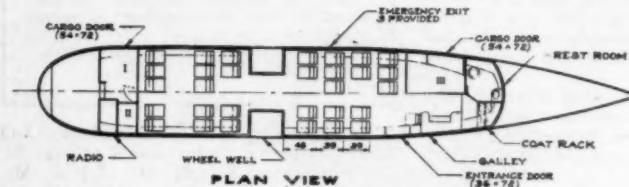
The aircraft is powered by two Pratt & Whitney R-2800 2SC15-G driving 3-bladed 16-ft. diameter propellers. Propeller clearance is 25 in. from the fuselage and 30.6 in. from the ground. Landing gear is of tricycle type with dual 27-in. smooth contour tires on the nose gear and single 45-in. low pressure tires on the main gear. A tail skid is included for added safety.

Special maintenance features include a unit designed power plant installation which permits full interchangeability between nacelles of the unit forward of the firewall, with access to the power and accessory sections provided by means of

easily removable pieces of cowling. Control, electrical and hydraulic runs are confined to the body section above the ceiling and the wing leading and trailing edges, thus combining very direct runs to control surfaces and engines with maximum accessibility for maintenance.

The fuselage interior of the 431-16 is divided into seven compartments: pilots' cockpit, two cargo compartments and a radio compartment immediately aft of the cockpit, forward passenger cabin, aft passenger cabin and rear cargo compartment. The main forward cargo compartment is located on the right side of the fuselage and has a floor area of 15 sq. ft. and a volume of 90 cu. ft. A secondary compartment with a floor area of 6.6 sq. ft. and a volume of 40 cu. ft. is provided on the left side of the fuselage just aft of the radio compartment. The aft cargo compartment has an area of 22 sq. ft. and a volume of 132 cu. ft., and is located on the right side of the fuselage opposite the passenger entrance and buffet and between the rearmost seats and the lavatory. Separate 54x72 in. cargo doors are provided on the right side of the fuselage for both forward and aft compartments. Additional access to all cargo compartments is provided from the passenger cabin, so that passenger baggage can either be loaded through the cargo doors, or carried aboard and handed to the cabin attendant for stowage.

The passenger cabin is divided into two sections connected by a passageway between the wheel wells. Two rows of three seats abreast facing each other on



Profile and three-view drawings of Boeing Model 431-16.

the right side, an additional double seat facing forward, and double seats facing each other on the left side with an additional double seat facing forward provide accommodations for 14 passengers in the forward cabin; while alternating rows of two and three seats on the right side and three rows of double seats on the left side accommodate 16 more in the rear cabin. The main 36x72 in. entrance is located in the aft cabin on the left side of the fuselage just forward of the galley.

Performancewise, the 431-16 is estimated to have a maximum speed using normal power at the low blower critical altitude (10,000 ft.) of 287 mph, a cruising speed at maximum cruise power at 10,000 ft. of 252 mph, and a landing speed of 80 mph. Rate of climb at sea level is estimated at 1540 ft./min. using normal power and 1120 ft./min. using 80 per cent normal power. The one engine inoperative ceiling is 15,000 ft. for a .02V..2 rate of climb, and 8,300 ft. for a .04V..2 rate of climb. Two engine service ceiling, normal power, is over 30,000 ft. The aircraft is designed primarily for low and medium altitude operation although provision is made for future modification to withstand pressurization loads.

Take-off distance over a 50-ft. obstacle is estimated at 2,550 ft., and landing distance over a 50-ft. obstacle at 2,600 ft. CAR field lengths are 3,700 ft. for take-off and 4,250 ft. for landing at gross take-off and landing weights respectively. With water injection, the take-off rating of the engines is increased to 2,400 hp each, and take-off distance at a gross weight of 36,000 lbs. over a 50 ft. obstacle is reduced to about 2,350 ft. This in turn reduces the required CAR field length for take-off to about 3,250 ft.

Boeing engineers estimate that the 431-16 will carry a 7,900 lb. payload over ranges up to 475 mi. allowing a flight altitude of 10,000 ft. for trip lengths of over 200 mi., climb at 80 per cent sea level meto, cruise at 60 per cent sea level meto, no wind and reserve fuel for 200 mi. plus $\frac{3}{4}$ hrs. (200 gals.) on trip lengths 200 mi. and over. This decreases to about 7,100 lbs. for a 690 mi. range, the maximum with normal fuel capacity of 706 gals. With a capacity of 978 gals., range is increased to 1,110 mi. with payload reduced to about 5,300 lbs. for this distance.

Block speeds, calculated under the same conditions enumerated above, range from about 178 mph for 120 mi. ranges to 230 mph for ranges in excess of 950 mi. Direct operating costs on the basis of a 100 percent load factor vary from 12.8c per ton mile over 120 mi. range to 14.2c per ton mile for a 1,000 mi. range, reaching a low of 10.75c per ton mile at a range of approximately 450 mi.

Boeing Designs Four-Engine Transport for Local Hauls

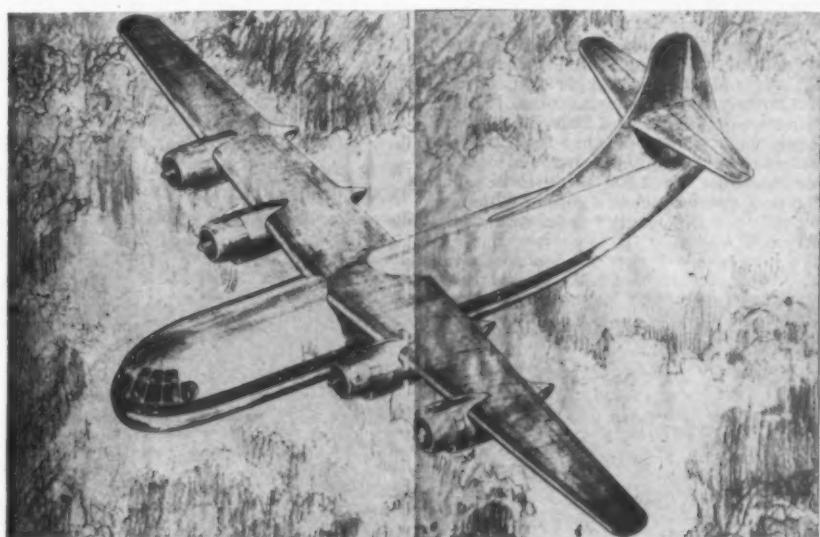
Model 431-17 Has 550-Mile Range; 12,535 Lb. Payload

IN addition to its two twin engined medium transports—the 20-passenger 417-22 and the 30-passenger 431-16—Boeing Aircraft Co. is designing a four-engined 30-passenger high-wing transport for local service operation on mainline airways, it was learned last week. Preliminary proposals for the new aircraft, designated as Model 431-17, have already been submitted to the airlines.

Basically the 431-17 is a four engined version of the 431-16 powered by four

9,335 lbs. respectively in the take-off and landing conditions. Span of the 17 is 101 ft. and wing area 815 sq. ft. giving a wing loading in take-off condition of nearly 49.7 lbs./sq. ft. and in landing condition of nearly 45.8 lbs./sq. ft. Overall height and length are 72 ft. 8 in. and 26 ft. 1 in. respectively; maximum fuselage width is 11 ft., and main gear tread is 17 ft.

From a comparison of the issued specifications of the 431-17 and the -16 it appears that the fuselages of the two versions, together with the landing gear which retracts both main and nose gear into the fuselage, are identical except for some beefing up of the structure to

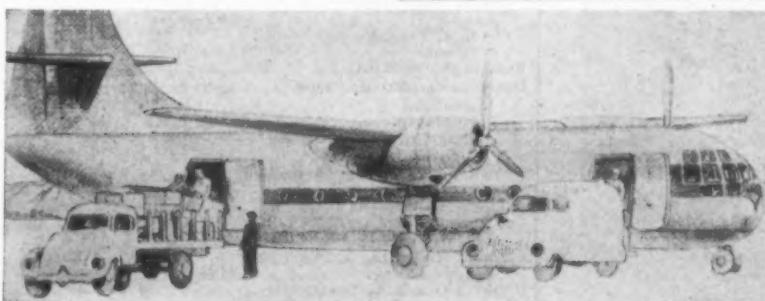


Wright R-1820 (731C9GC1) engines rated at 1,200 hp each for take-off, and is presumably designed to meet the requirements of the smaller airlines desiring four engine prestige and operating characteristics, but without sufficient traffic to warrant larger four-engined types. Three-bladed propellers of 12 ft. diameter provide a 53.6 in. ground clearance.

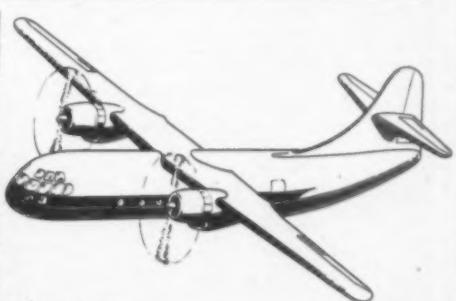
The 431-17 has a take-off gross weight of 40,500 lbs. and a landing gross weight of 37,300 lbs. as against a manufacturer's weight empty of 27,017 lbs. and an operating weight empty of 27,965 lbs. This permits useful loads of 12,535 lbs. and

accommodate the higher weights. This includes interior arrangements as well as general dimensions. The 431-17, however, has a somewhat longer wing to accommodate its four power plants, and a consequently increased wing area.

Preliminary performance estimates on the -17 show a maximum speed with normal power at low blower critical altitude (5,400 ft.) of 285 mph; a cruising speed at maximum cruise power at 10,000 ft. of 253 mph; and a landing speed of 80 mph. Sea level rate of climb at normal power is 1,850 ft./min., and at 80 percent normal power 1,400 ft. min. The



Cargo loading features and artist's conception of Boeing Model 431-16.



one-engine inoperative ceiling for a .02V..2 rate of climb is 23,300 ft., and for a .04V..2 rate of climb 21,200 ft. Service ceiling at normal power is over 30,000 ft.

The 431-17 will take-off over a 50 ft. obstacle in 2,900 ft. and will land over a 50-ft. obstacle in 2,600 ft. It will require a 3,650-ft. C.R. field length for take-off and a 4,250-ft. C.R. field length for landing.

Range of the 431-17 with a normal fuel capacity of 800 gal. will be approximately 550 miles, and with a 1,300 gal. fuel capacity slightly in excess of 1,150 mi. Payload is estimated at 8,000 lbs. for ranges up to 200 mi., at 7,900 lbs. for 200-530 mi., and at 4,700 lbs. for 1,150 mi. These calculations are based on a flight altitude of 10,000 ft. for trip lengths of 200 mi. and over; climb at 80 percent sea level meto; cruise at 60 percent sea level meto; no wind; and a fuel reserve of 280 gals. (200 mi. plus $\frac{1}{4}$ hr.) for trip lengths of 200 mi. and over.

Estimated block speed, based on the same conditions, ranges from 190 mph at 200 mi. and 210 mph at 400 mi. to approximately 225 mph for 1,000 mi. Direct flying costs, assuming a 100 percent load factor, vary from approximately 13.7c per ton mile for 200-mi. trip lengths to 16.6c per ton mile for 1,000 mi. trip lengths. The cost curve reaches a low of 12.2c per ton mile for trip lengths of approximately 525 mi.

New Curtiss-Wright CW-28 Has Gross Weight of 40,000 lbs.; Dual Wheels

The Curtiss-Wright CW-28, fifth of the aircraft offered in response to American Airlines' recent proposal for a twin-engined medium transport, is a modification of the war tested C-46 Commando, and the previously announced CW-20 commercial version, differing principally in the fact that it will have a dual-wheeled throughout tricycle landing gear, and be powered by two 2,500 hp Wright R-3350 engines driving reversible pitch Curtiss electric propellers.

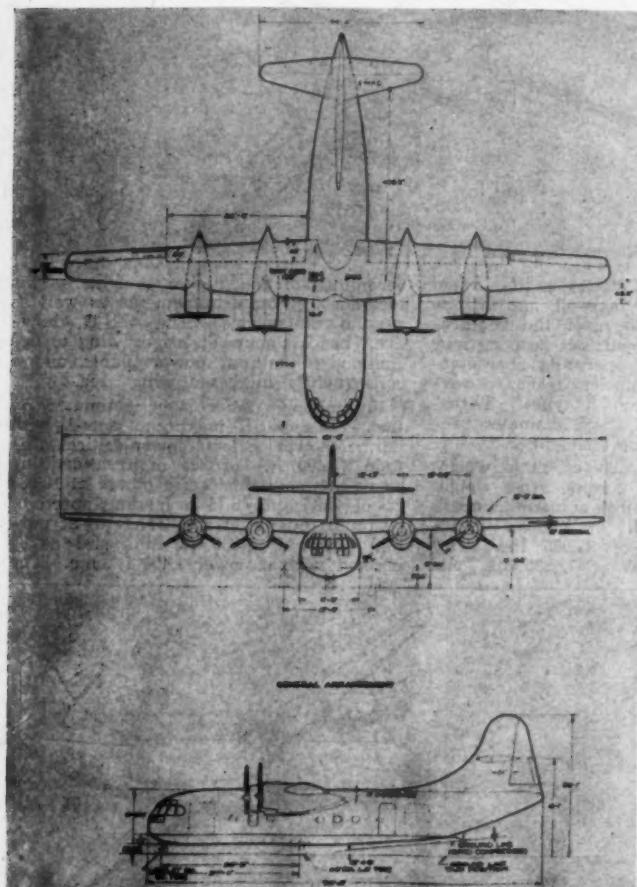
The CW-28 has a gross weight of 40,000 lbs., and an empty weight of 27,000, leaving 13,000 lbs. for fuel and payload. The number of passengers accommodated is not specified in the Curtiss press releases but it is presumed that several alternative versions will be offered.

Span of the CW-28 is 100 ft., overall length 73 ft., and overall height 27 ft. Wing area is 875 sq. ft. and wing loading is 45.7 lbs./sq. ft. The CW-28 is said to have a cruising speed of 288 mph (altitude

and power not specified) and a service ceiling of over 30,000 ft.

Interior features of the new aircraft will include fluorescent lighting and an annunciator system to permit each passenger to call the flight attendant. Heat for the cabin and thermal anti-icing will be provided by a system of heat exchangers mounted on the engine exhaust stacks, with an independent unit to provide auxiliary heat for ground operations. Propeller de-icing will be by electrically heated pads mounted on the propeller leading edges. Special facilities are provided in the nose for installation of an enclosed instrument landing antenna.

Particular attention, Curtiss-Wright reports, has been paid to the buffet and other facilities for the stewardess, with a special refrigerated unit to keep desserts and salads at desired low temperatures. Conveniently located shelves and tray arrangements are said to reduce stewardess serving time to a minimum.



Three-view drawings of Boeing Model 431-17.

Douglas Compares DC-8 and DC-3

Douglas Aircraft Co., last fortnight released the following comparative specifications between the DC-8 and the DC-3. All economic data, Douglas said, was calculated by methods recommended by ATA.

	DC-8	Model 1004	DC-3
Dimension:			
Span	110 ft 2 in.	95 ft.	
Wing Area	1,104 sq. ft.	987 sq. ft.	
Length	77 ft. 10 in.	64 ft. 5 1/2 in.	
Height Overall	25 ft 9.5 in.	16 ft 11 in.	
Weights:			
Maximum Takeoff Weight	39,500 lb.	25,200 lb.	
Maximum Landing Weight	39,500 lb.	24,400 lb.	
Weight Empty	23,915 lb.	16,700 lb.	
Useful Load	15,585 lb.	8,500 lb.	
% Useful Load/Gross Weight	39.4	33.8	
	Allison	P&W R-1830	
Engines:	V-1710	WAC R-1820	
Takeoff Power	1600 hp	1200 hp	
Rated Power	1200 hp	1050 hp	
Max. Cruise Power, 10,000 ft.	1025 hp	700 hp	
Performance:			
Max. Cruise Speed, 10,000 ft.	270 mph	203 mph	
Max. Two-Engine Climb, S. L.	1030 fpm	1230 fpm	
Max. Two-Engine Climb, 10,000 ft.	840 fpm	970 fpm	
Max. One-Engine Climb, S. L.	285 fpm	250 fpm	
Max. One-Engine Climb, 10,000 ft.	145 fpm	90 fpm	
C.A.R. Field Length, S. L. Takeoff	3,950 ft.	3,950 ft.	
C.A.R. Field Length, S. L. Landing	3,960 ft.	3,320 ft.	
C.A.R. One-Engine Operating Altitude	12,000 ft.	10,200 ft.	
Economy:			
Payload at 300 mi. range	12,000 lb.	5,600 lb.	
Including Passengers	48 max.	21	
Cargo in excess of baggage	2,400 lb.	1,400 lb.	
(at not more than 10 lb./cu. ft.)			
Block-Block Speed at 300 mi. Range	223 mph	170 mph	
(against 10 mph headwind)			
Direct Operating Cost/Plane Mile	41.6c	36.5c	
Direct Operating Cost/200 lb. Mile	0.695c	1.3c	

From Karachi to Washington in Fifty-eight Hours

It's Fast, But Not All Pleasure

American Aviation's Executive Editor Comes Up With Some Tips to Make the Trip Appeal to Postwar Vacationists

By ERIC BRAMLEY

I FLEW from Karachi, India, to Washington, D. C.—9,000 miles—in 58 hours and 10 minutes elapsed time.

It was hard to realize that one could leave India on Friday and be in Washington on Sunday. It brings home the wonders of air transportation—it gives you a slight idea of what can happen when America's international airlines start operating.

The Karachi-Washington service is operated by the Intercontinental Division of TWA, under contract to the Air Transport Command. The service is exclusively military, but the breaks go to TWA because the company has a commercial certificate for almost the same route. The experience it is gaining would have cost hundreds of thousands of dollars under normal conditions.

TWA is receiving a beautiful break on the flight announcements. At Karachi, for example, the loudspeaker announcement may go something like this: "TWA Flight T-2 is ready for immediate departure to Cairo, Casablanca, New York and Washington." A similar announcement is made at almost every stop en route. This is probably the first time ATC has allowed an airline to be identified by name.

Leaving Karachi, the aerial gateway to India, in the afternoon, the C-54 completes the first leg of the flight to Abadan, Persia, in six hours and 45 minutes, a hop of 1,305 miles. After a dinner stop of one hour (which is enough in Abadan's terrific climate) it proceeds 1,098 miles to Cairo, Egypt—almost six and a half hours. The TWA crew on this leg of the trip was Capt. J. T. Miller, 1st Officer M. R. Brown, Navigator S. B. Hodges, Flight Engineer R. T. Gray and Radio Operator K. F. Immel.

The stop at Cairo—about one hour—is for crew change, servicing and eating (frankfurters, fried potatoes and salad at about 4 A.M.—not recommended). The next hop is in the early morning hours to Tripoli, 1,095 miles in six hours and 20 minutes. Another one-hour stop and you're on your way to Casablanca, 1,232

miles in something over seven hours. Elapsed time for Karachi-Casablanca was 30 hours and five minutes. The crew on this leg was Capt. J. L. Beede, First Officer M. Jones, Navigator W. Nesbitt, Flight Engineer J. Mann and Radio Operator J. T. Lannin.

The stop at Casablanca is approximately three hours. Most passengers ride only that far, leaving the plane at Casablanca to be billeted and put on the backlog for the flight across the Atlantic. This may take a few days, a week or sometimes longer. Comparatively few people ever come all the way from India on the same airplane.

From Casablanca it is a six-hour flight, 1,020 miles to Santa Maria in the Azores, flown by Capt. D. R. Fulton, First Officer J. J. O'Meara, Navigator M. Chrismann, F/E R. W. Davis and R/O R. H. Middlekauff. By this time it is night again—also time to eat again.

Azores—to-Newfoundland

After an hour in the Azores, another crew takes the plane on its longest jump, 11 hours and five minutes to Newfoundland. This crew was Capt. R. D. Garrett, First Officer C. D. Denk, Navigator H. V. Jespersen, F/E H. B. Schultz and R/O J. D. Lane. Another one-hour stop for breakfast and on to New York—six hours and 15 minutes, flown by Capt. David Spain, First Officer H. Ellington, Navigator J. Nyland, F/E J. Gantz and R/O E. Crow.

After clearing customs, the plane proceeds to Washington, reaching there on the afternoon of the second day.

It's as easy as that—you leave Friday and arrive Sunday.

Such a trip not only brings home the wonders of air transportation—it serves to make one aware of the problems that the airlines will encounter when they inaugurate commercial service.

For instance, what about food and hotel accommodations when the Army pulls out? Ordinarily, of course, an airline does not have to worry about billeting, but suppose there is a mechanical delay at one of the smaller intermediate stops? At present you have no hesitation about eating in an Army mess or sleeping in an Army bed, but in a lot of places

along the routes it will be almost worth your life to eat a meal in an ordinary restaurant. There's dysentery, cholera and a host of other diseases to contend with. Drinking water must be purified. Are the airlines going to set up their own eating and sleeping establishments, as Pan American Airways did on some routes? Will the charges be included in the fares?

A trip such as I have just finished—flying 9,000 miles in 58 hours—definitely is not to be recommended as a steady diet. Despite the fact that there were comfortable seats in the airplane, it's impossible to get any real rest. Each six-hour hop seems longer than the previous one and by the time you reach Washington you're in no shape to go to the office the next day or the day after. So, despite the fact that super-fast airplanes are promised, it looks from here as though comfortable sleeping accommodations aloft will have to be furnished.

While passing the time away en route, crew members and I were also kicking around another idea. It is true that there will be some passengers whose only purpose will be to get from, say, New York to Bombay as quickly as possible. But there will be others, and they may be in the majority, who won't mind taking five or six days to reach Bombay. So, why not break the journey at maybe two of the major centers along the route? Land a person in Casablanca on Monday, give him two days to see the town and to rest, and pick him up on Wednesday's plane. Do the same in Cairo. Stopovers on a through ticket should not violate international agreements.

Airlines operating from the U. S. to the tropics will also be faced with another problem. During part of the year, it will be necessary for their planes to leave the U. S. equipped with a lot of winter flying equipment which by the time they are halfway to destination will be just so much extra weight. Probably it will be feasible to have a division point halfway where passengers will change to planes equipped for tropical flying.

Too Long on Ground

Ground time and taxiing time should be cut to a minimum. It's possible to ruin an undershirt and a shirt from the time you leave the ramp until you're in the air—tropical climates are conducive to free perspiration.

Maintenance in the tropical regions will not be too easy. Terrific heat and monsoon weather will be complicating factors, and personnel will probably have to be rotated frequently. (In Abadan, where the temperature on the ground sometimes reaches 100 at midnight, it is often impossible for a pilot to run up the plane's engines before take-off—oil temperatures go out of sight.) The Army has learned much about maintenance in the tropics that should be of use to the airlines.

Flying the Atlantic should present no unusual problems. The "mystery" of ocean flying seems to have been thoroughly solved. As TWA Capt. Garrett

ATC Stresses Safety in Operations

KUNMING, CHINA—Now that the war has ended, some big changes are taking place in the operations of ATC's China Wing, all designed to get the boys safely to ports of embarkation for shipment to Uncle Sugar.

During wartime it was necessary to use procedures that were not always the safest in the world. But now ATC is interested in seeing that everyone gets home safely.

To this end, ATC is:

1. Doing no more night passenger flying over the Hump.
2. Decreasing the allowable gross loads on all airplanes.
3. Requiring all planes to carry large gas reserves.
4. Intensifying the maintenance of its aircraft.
5. Urging pilots to be cautious.

put it: "We've practically got a rut across the ocean."

My personal opinion is that there will be a need for more navigational aids, plus some intermediate fields through the Middle East. Thanks to the Army, most airports are adequate. Even the ATC terminal buildings will be adequate in many cases.

How about the traffic on a route to India? Again a personal opinion—it will take some years to build it up, unless the situation mentioned later occurs. According to the CAB decision in the Atlantic case, TWA estimated 6,000 passengers yearly to India. American Export's estimate was 2,300, or approximately 6½ passengers a day, year round. I am inclined to think that even Export's figure is optimistic, at least for a few years. Many things will affect the traffic—the status of our economic relations with India, perhaps even the political-religious situation in India.

As for pleasure travel—in five months during which I covered 10,000 miles just inside India, I saw few places to which I would consider returning for a vacation. One place meriting consideration is Ceylon, which can be delightful. Others are Kashmir and Darjeeling. And it's nice to see the Taj Mahal in Agra. If there are other sufficiently enticing places, I missed them.

Business travel—again depending on economic relations—gives some promise. As much (or more) of this will come from Bombay as from Calcutta. Bombay is a modern city, with many business interests. ATC has been hauling some commercial business out of Bombay to the U. S., even at 8,000 rupees (\$2,400) for the round trip.

There is one factor that may give travel to the east a shot in the arm right from the beginning. As Wayne Parrish, editor of *AMERICAN AVIATION*, has pointed out, Europe will not be ready to receive sightseers and vacationists for some time. People may thus turn to the East—if fares are right—and provide the necessary impetus until normal traffic can be built up.

Put to Test by ATC

This correspondent tries not to think about how long it would have taken to open these routes if it had not been for the war and the pioneering done by the Air Transport Command. Thanks to ATC, airplanes have been tested, men have become familiar with routes and conditions, and the airlines are no doubt aware of the problems mentioned in this article.

We're getting into this new era of transportation that everyone has been talking about. It's going to take some development work, but the airlines have been busy doing that ever since they were established. People abroad now know American service and they like it. The future holds much promise.

Depew Named to SPB

Richard H. Depew, formerly manager of special projects for the Fairchild Aircraft Division, of the Fairchild Engine & Airplane Corp., took over on Sept 17 his new duties as Chief of the Aircraft Disposal Section of the Aircraft Division, Office of Surplus Property, RFC. Except for three years, Depew has been with Fairchild since 1923.

Scotland Says British Air Policy Halts U. S. Service

'Home Rule' Policy Asked To Permit Unfettered Flying

THE fact that Great Britain is likely to be by-passed by all U. S. lines is extremely serious. By October 1 it is probable that not a single American airline will operate to or in Britain."

These statements were recently made by the Duke of Hamilton, chairman of Scottish Aviation, Ltd., while presiding at a luncheon in honor of T. B. Wilson, chairman of Transcontinental & Western Air, Inc. The affair was held at Prestwick Airport, owned and operated by Scottish Aviation, and marked termination of TWA's use of the Ayrshire, Scotland, field resulting from cancellation of an ATC transatlantic contract. CAB's recent North Atlantic decision whereby TWA was routed to the Continent via Foynes has, at least for the present, ended hopes of Scottish Aviation that TWA would operate through Prestwick.

McIntyre Toasts Wilson

In a toast to the guest of honor, D. F. McIntyre, managing director of Scottish Aviation, stated that his tributes to Wilson and TWA could apply equally to other American airlines and to the U. S. Government, which appreciated both the significance of the airplane and the benefits of regulated competition. "Unfortunately we have not been blessed with a similar air policy in this country," he added.

McIntyre, one of the most energetic opponents of Britain's chosen instrument policies, stated that Britain was at a crossroads where she must choose between monopoly and "the proved American system of regulated competition." Any type of monopoly, government or commercial, spells "a slow and protracted death" for British air commerce.

McIntyre also advocated greater consideration for aviation groups free from connections with surface transport interests. The protection given to British railroad trade unions and railroad stockholders must not interfere with the nation's right to an optimum development of air transport. Aviation should not be imprisoned "within some great transport monopoly in order to protect the ideas and investments of the 19th Century in older forms of transport," McIntyre asserted.

Wilson's responses were concentrated on praise of Prestwick Airport which, in his opinion, is probably the world's finest international airport now in operation. "We hope that we will come back to Prestwick some day with some rights to land here," Wilson said.

The attack on British air policy by Scottish Aviation is not entirely a new development. The company has been in the vanguard of the forces demanding a policy of regulated competition as against both the chosen instrument or nationalization. It has steadily maintained that

Britain needs a greater number of airlines, unfettered by ground transport, in order to provide an "adequate group of operators."

Scottish Aviation has applied for permission to operate scheduled air services within the United Kingdom, and from Prestwick to Europe and to the United States.

As expressed in the remarks of the Duke of Hamilton, Great Britain must either be an airfaring nation or degenerate into a second- or third-class power. Unless the nation's initiative and enterprise receive full scope Britain will inevitably be left behind.

As on previous occasions, the statements of McIntyre and the Duke of Hamilton received vigorous editorial support from several Scottish newspapers. The September 14 issue of the *Glasgow Herald* stated that the "retrograde mentality" which does not appreciate the importance of civil aviation has made it "impossible for agreement to be reached with the progressive American airlines . . . Britain has now been by-passed in world air transport." The *Glasgow Herald* also charged that British aviation was tied to railroad and steamship interests which, in "self-defense," restricted the newer form of transportation.

The *Scotsman* went so far as to state editorially that the decision to use Foynes instead of Prestwick was the result of U. S. disapproval of British policies. The journal attributes this development to the "failure of the British and American Government representatives at the Chicago Conference to reach an agreement on a vital issue in air policy." If the new Labour Government now adopts nationalization, the prospect of any agreement with the United States "will not only be more remote but definitely ruled out," the *Scotsman* believes.

Suggests 'Home Rule'

The *Bulletin* suggested aviation "home rule" for Scotland. Scotsmen are ready to make use of their asset at Prestwick and build up air services to and from Scotland while London is making up its mind.

The same *Bulletin* editorial reports a "grim" reception in the Highlands to a glowing British broadcast about a Swedish transport flying to Moscow. The aircraft is a converted B-17. Scottish efforts to acquire and convert American aircraft were blocked by the British policy of waiting for British-built transports which were not available and, the *Bulletin* adds, "don't look like being available for a long time."

The reference is to Scottish Aviation plans announced several months ago for the purchase of surplus U. S. Douglas transports located in England in order to convert them to "stop-gap" airliners for British routes. McIntyre came to the United States last May to present the application to the U. S. Surplus Property Board.

Chennault Says China Would Welcome U. S. Air Carriers

U. S. Bases in China Will Be Available for American Use

By GERARD B. DOBBEN

MAJ. GEN. CLAIRE L. CHENNAULT, famed commander of the Flying Tigers and the U. S. 14th Air Force, believes that China offers tremendous potentialities for the expansion of commercial transport aviation and what is further, he believes that China will welcome U. S. airlines if they desire to operate there.

Interviewed by AMERICAN AVIATION in Washington's Pentagon building last week, Gen. Chennault said he had fought for eight years to build U. S. prestige in China and had accomplished it. And when he said that U. S. airlines and U. S. capital would be welcomed in China, he stressed that he was not including foreigners in general.

Gen. Chennault viewed air transportation as absolutely necessary to the sound economic development of China because one of China's great deficiencies has always been a lack of good transportation. He feels that American capital and American controlled operations would have protection from the Chinese government. He added that the Government is much stronger today than before the war, and able to give good protection.

He described the general terrain of China away from its coastline as similar to the U. S. Continental divide.

"Flying in China is no picnic. It has the most variable weather in the world, with a change every 100 miles and a mountain in almost every cloud. It will require well financed, well organized air transportation to succeed. The need is there. Just how it will be developed is a guess," he stated.

With reference to landing facilities, Gen. Chennault says China has more air fields than she ever can use. The General had charge of their construction both for the Chinese government as well as the U. S. Army and while he tried to build airports in such a way and in such places as to make them available for peace time uses, war exigencies oftentimes prevented carrying out this plan. The Japs too built a number of good airports in occupied parts of China all of which should become important links in China's post-war air transport system.

U. S. Has Reserved No Rights

Gen. Chennault stated that as far as he knew, the U. S. had reserved no rights as the future use of U. S. built airports is concerned. They will become the sole possession of the Chinese government six months after the official termination of hostilities. For China to have given such rights would be comparable to our Government giving a foreign power control over bases in this country, he said.

"But," he said, "I'm sure that these airports will be available for American use when and if needed."

Elaborating on his statement that China has more air fields than she ever can use, Gen. Chennault pointed out that at Kweilin for instance, there were two B-29

Superfortress landing fields, one B-24 Liberator base and one landing field for fighter planes.

And in the Chengtu area, he said, are located 11 airfields, four of them for B-29s and seven for all other types of planes. In sparsely settled, wild Leuling area, Gen. Chennault stated is the world's largest airfield, with a hard-packed stone runway, built by hand labor, 12,000 feet long and two other runways more than 5,000 feet in length. But because the Leuling area is undeveloped, these airports will have little peacetime utility.

Gen. Chennault paid high tribute to Pan American's affiliate, China National Airways Corp. which he said had rendered the allied cause invaluable aid in the early stages of Japan's invasion of China.

"CNAC built American prestige in China. They stuck it out when no one else did," he stated. That was one of the reasons why he feels U. S. Flag lines will be welcome in China. CNAC, he said, was under exclusive operational control by Pan American but under the administrative control of the Chinese government.

Eurasia Taken Over

Another airline, the German controlled Eurasia, was taken over by the Chinese government and operated during the war under the name of the China Air Transport Co. Although handicapped by lack of modern equipment, Gen. Chennault said this line performed yeoman service over the old Chungking-Kunming route. Included in its equipment was an old Junker tri-motor, a converted bi-motored Lockheed Hudson and a miniature Japanese built DC-2, powered by 450 Wasp Jr. Pratt & Whitney engines. This Japanese version of the DC-2 was an object of curiosity to all aviation men who viewed it. Gen. Chennault said the Japs had cut down the dimensions of the DC-2 throughout and in the end had produced a good piece of equipment. When the Chinese government took over Eurasia Airline, they also took over the German ground and radio facilities and these were described as being of unusually high quality.

Gen. Chennault said another great force which had helped China resist the invader was provided in the Russian Volunteer Group air force which at its maximum had operated 500 to 600 planes, of all types, in the China theater. They came in as early as November 3, 1937 with E-15 bi-planes, E-16 monoplanes, SB Light bombers and the necessary transports for keeping the outfit supplied. The E-16 was compared to the old Wedell racer but it had two Wright Cyclone, 850 hp engines—much more power than its American equivalent.

Another Russian plane which won Gen. Chennault's admiration was a small aircraft comparable in size to the Boeing P-12—one of this country's first pursuit planes. This plane was powered with a 450 hp. engine and armed with four machine guns which were synchronized to shoot through one propeller.

This Russian air force won the respect



General Chennault

of Gen. Chennault through their discipline and the high quality of their operations. He said generally speaking the Russians proved they were adept at all phases of air operations, including maintenance which has generally been regarded as one of their weaknesses.

"I got my first estimates of Russia's air force through contact with this group and for that reason I was one of the few who didn't think Germany could whip Russia in six months," he said.

Gen. Chennault paid high tribute to the operations of the Air Transport Command. When asked to express an opinion as to the best service, he replied that while he had a preference, he did not think it would be politic to state it.

"I might state that any type of plane that could bring supplies to us was a good plane," he added.

He cited Brig. Gen. C. B. Haines, Col. R. L. Scott, Lieut. Col. Robert Olds and Lieut. Col. Bert M. "Tex" Carlton for their heroic services in pioneering ATC operations in China.

Gen. Chennault said he had no definite opinion as to what the future might hold in China for markets for U. S. built personal planes. While the war has made China air conscious as never before, he said he did not know to what extent that Chinese individuals would purchase private planes, although he considered that this market might be developed. He felt there might be good opportunities for charter and feeder line operations once scheduled main line operations are placed in successful operation.

Young People Studying Aviation

Gen. Chennault said that young people in China are now studying aviation. He said one parachute society had been formed and was using a tower for jumping at Chungking. These activities have the encouragement of the Chinese government, he stated.

Reminded that parachute jumping was essentially a military activity, Gen. Chennault said that it was conceivable that Chinese Civil Aviation laws might require the carrying of parachutes as a safety measure. He emphasized the number of lives that had been saved in military operations by use of parachutes in emergencies.

He said the goodwill which the Chinese hold toward the Americans augurs well for our future relations with China.

Martin Announces Model 228 As Second Land Transport

Basically Same as Model 202, Craft Has 8371 lb. Loading

THE Glenn L. Martin Company's entry into the commercial land-based transport field will be a two-fold proposition, it was learned last week. In addition to its recently announced Model 202, the Baltimore manufacturer has designed and engineered a second lower powered 26-passenger transport for airlines operating in low traffic density areas, in which Eastern Air Lines among others is reported extremely interested.

Basically the 228 is the same aircraft as the 202 employing the identical wing with its advanced combination of the Van Zelm auxiliary airfoil aileron and double slotted flaps as the larger version. Tail surfaces and landing gear are likewise interchangeable between the two aircraft although smaller wheels and tires are used on the 228 and it has been possible to lighten some of the landing gear fittings because of the lower gross weight. The 228 fuselage is the 202 fuselage with a 39-in. section—one row of seats—removed just aft of the rear wing spar. Since this is at a manufacturing joint in the larger ship, it is possible to build the two fuselages almost up to the final assembly point on the same jigs and still not penalize either version from a weight or structural standpoint.

The rear cargo compartment is eliminated in the 228 to save the added weight of the cargo door and cargo flooring, and the Martin Co. believes that the 240-cu. ft. forward cargo compartment will prove adequate for most carriers. For those desiring additional cargo space, however, a 150-cu. ft. rear compartment identical to that of the 202 can be provided. Weight removed aft of the cg by the shortened fuselage and cargo compartment elimination compensates for the weight reduction occasioned by the lighter engines forward of the cg to maintain perfect balance.

Wright R-1820 C9HD Engines

The 228 is powered by two Wright R-1820 C9HD engines, a new version of the R-1820 designed for use in the Ryan Fireball Navy fighter which develops 1425 hp. for take-off at sea level and 1275 net hp. at 2,500 rpm. from sea level to 4,300 feet. Three-bladed full-feathering Aeroprops of 13 ft. 6 in. diameter are used to provide sufficient propeller size to absorb future power increases.

Certified gross weight of the 228 for both landing and take-off is 28,500 lbs. as against a manufacturer's weight empty of 19,047 lbs. and an operating weight empty of 20,129 lbs., leaving 8,371 lbs. for disposable load. For normal operations this is assumed to consist of 411 gals. of fuel including an allowance of 4 gals. for combustion heaters, 27.5 gals. of oil, 26 passengers, 780 lbs. of baggage and 500 lbs. of cargo.

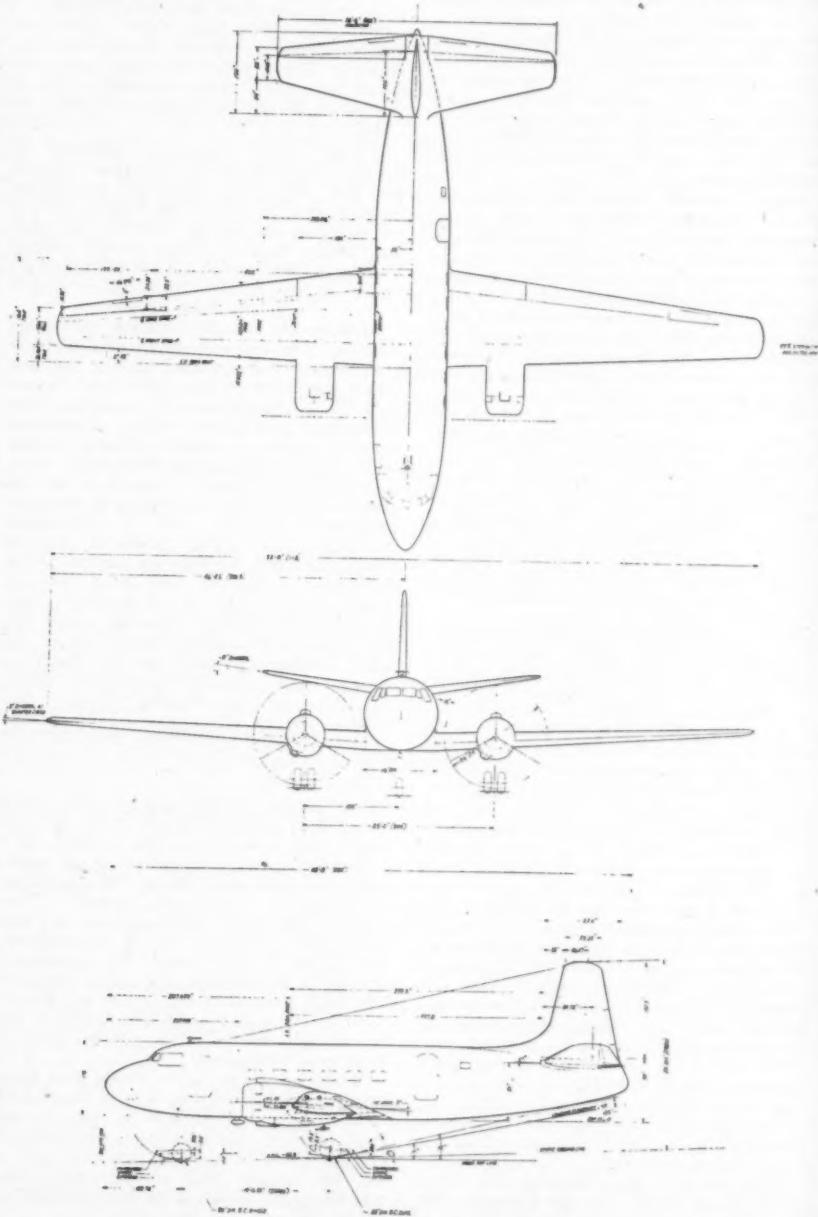
General dimensions of the 228 are: span 92 ft. 9 in.; aspect ratio 10; height over tail, 3-point position, 24 ft. 10 1/2 in.; overall length 68 ft. 8 in.; maximum fuselage cross section 9 ft. 8 in.; mean aerodynamic chord 120.2 in.; span of tail 36 ft. 6 in.;

propeller clearance from ground 3-point position, 11 in; propeller clearance from fuselage 14 in.; main gear tread, 25 ft.; and minimum turning radius 60 ft. Dual 33-in. wheel and brake assemblies with 10-ply smooth contour tires are specified for the main gear, and a single 30-in. wheel and brake assembly with a 10-ply smooth contour tire for the nose gear. Total wing area is 860 sq. ft. and wing loading at certificated take-off and landing weight is 33.14 lbs. sq. ft. Power loading is 10 lbs./take-off hp.

Center of gravity in the operating weight empty condition is 27.2 per cent MAC with landing gear extended and 24.6 per cent MAC with landing gear retracted. CG limits with landing gear extended are 17% MAC forward and 32% MAC aft, and with landing gear retracted 14.8% MAC forward and 32% MAC aft.

The 228 incorporates all of the advanced safety and maintenance features of the 202 including a structural floor and bomb-bay door openings for servicing equipment, underwing fueling, three point engine mount suspension and outboard location of all fuel in Mareng cell tanks. Total fuel capacity is 650 gals. Further details on maintenance and safety items will be found in the description of the 202 (AMERICAN AVIATION, Sept. 15).

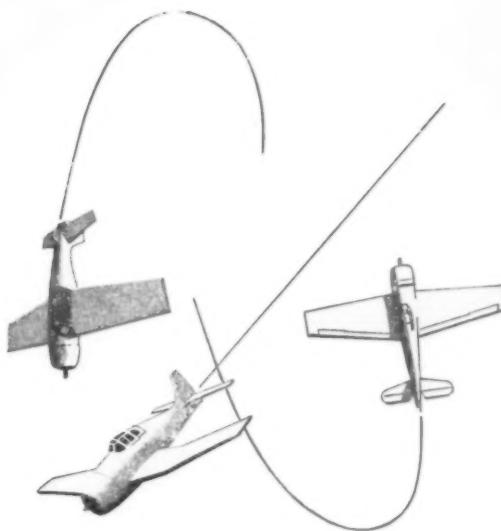
The interior of the fuselage is likewise



Three-view drawings of Model 228.

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Today...Tomorrow - look to the leader for leadership



STROMBERG CARBURETOR RESEARCH

... cancelled out gravity and inertia effects
in aircraft carburetion

Prior to adoption of the Stromberg* Injection principle, complete plane maneuverability was impossible without momentary or continued "cuts" in engine power.

The Stromberg Injection design eliminated floats and the fuel level control previously used in carburetors, so that engine performance then became independent of the attitude of the plane and the effects of inertia.

The tremendous importance of this development on the

effectiveness of our military planes was readily apparent. The importance of Stromberg's constant research in all phases of carburetion improvement is now equally obvious; for it is no exaggeration to state that because of the knowledge and skill of Stromberg engineers—engines perform better—and aircraft gas lasts longer than ever before.

Consult Stromberg on your fuel feed and control problems. It will pay you to look to the leader for leadership.

*TRADE MARK

Bendix PRODUCTS DIVISION
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THE NEW KOLLSMAN FOUR-ENGINE SYNCHROSCOPE enables the pilot or flight engineer to bring all engines quickly to the same r.p.m. for the uniform power output required by economy and correct operating procedures. Designed at the request of AAF to cover military needs, these synchrosopes also have their application to transport aircraft, where they contribute to passenger comfort as well as to proper operation of the plane. The accuracy and dependability of these synchrosopes, together with their simplicity of operation, are characteristic of all Kollsman Aircraft Instruments.



KOLLSMAN AIRCRAFT INSTRUMENTS

PRODUCT OF



SQUARE D COMPANY

ELMHURST, NEW YORK

GLENDALE, CALIFORNIA

almost identical to the 202 except for the elimination of one pair of seats on either side, and of the rear cargo compartment. A slightly smaller buffet is provided since less passengers are to be served, but the baggage compartment opposite the passenger entrance remains the same with a 75 cu. ft. capacity.

Guaranteed performance on the 228 includes a 244 mph. cruising speed at 10,000 ft. at 70 per cent rated power (within plus or minus 3 per cent); a 10,000-ft. one engine inoperative maximum operating altitude for a .02V..2 rate of climb (within plus or minus 1,000 ft.); and a take-off distance to clear a 50-ft. obstacle with one engine inoperative and the other delivering take-off power of 3,450 ft. at sea level and 3,975 ft. at 3,000 ft. together with a CAR effective runway



Buffet of Martin 228

length for landing at sea level of 3,100 ft. (all within plus or minus 10 per cent).

Other estimated performance figures include a level flight high speed with normal power of 255 mph. at sea level and 266 mph. at 10,000 ft.; a cruising speed at 10,000 ft. of 229 mph. with 60% sea level rated power, and 209 mph. with 50% sea level rated power; a two engine maximum rate of climb at sea level of 1,460 ft./min. with normal rated power, and 1,080 ft./min. with 80% power; a two engine service ceiling for a 100 ft./min. rate of climb of 23,800 ft.; and a take-off distance at sea level to clear a 50 ft. obstacle of 2,150 ft. with both engines delivering take-off power. The maximum altitude at which the 228 will meet the one-engine inoperative approach flap climb requirement and the two-engine landing flap climb requirement is 3,000 ft. Operational range with a 5,700-lb. payload and 2,439 lbs. of fuel is computed at 400 mi., assuming engine manufacturer's specific fuel consumption increased 5 per cent, climb to 10,000 ft. at 80% power, cruising at 60% power at 10,000 ft. for 400 mi. less distance covered in climb, maneuvering time of .12 hrs. at 60% power, and reserve fuel for 200 additional miles plus 45 min. flight at 50% power.

The block speed curve for the 228, computed according to the approved ATA method for 60% meto power and a 10

mph. headwind rises sharply from 140 mph. for a 60-mi. range to 200 mph. for a 400-mi. range and then begins to level off reaching a high of about 216 mph. for a 1,000 mi. range. The direct flying cost curve, computed under the same conditions and assuming a 100 per cent load factor starts at 13.2c per ton mile for 75-mi. trip length, drops to 12.6c per ton mile for a 140-mi. trip length, rises to 12.7c per ton mile for 200 mi., drops to slightly under 12.6c for 250-280 mi., and then rises steadily to 18c for 1,000 mi. trip length.

At 70 per cent meto power, other factors remaining the same, the block speed curve shows 150 mph. for 60 mi.; 220 mph. for 400 mi., and 236 mph. for 1,000 mi. Direct flying cost is 13.5c per ton mile for 75 mi.; drops steadily to 13.05c per ton mile for 220-250 mi. and then rises steadily to 19.25c per ton mile for 875 mi.

Cost per plane mile ranges from 48c for 60-mi. trip length to 34c for 1,000-mi. trip lengths at 60% meto, and from 48c for 75-mi. to 34.2c for 1,000-mi. trip lengths at 70% meto. Direct hourly cost starts at \$70 for 70-mi. trip lengths, rises sharply to about \$73.30 for 250-mi. trip lengths, and remains at about that general rate for all longer trip lengths at 60% meto. At 70% meto, direct hourly cost starts at \$77 for 85-mi. trip length, rises fairly sharply to \$79.80 for 250 mi., and then rises gradually to \$80.20 for 1,000 mi. range.

Payload of the Model 228 varies from 3.6 tons at an 80-mi. range to 1.98 tons at a 1,000-mi. range using 60% meto, and from 3.56 tons for a 75-mi. range to 1.56 tons for a 1,000-mi. range using 70% meto.

An operating cost breakdown for both the Martin 228 and the Martin 202 will appear in a forthcoming issue of AMERICAN AVIATION.



Luggage Racks on the '228'

Reilly To Be Counsel For United in Washington, D. C.

James F. Reilly, former member of the District of Columbia Public Utilities Commission and also for several years



James F. Reilly

with the Civil Aeronautics Board, accepted the post of counsel for United Air Lines at Washington.

Reilly submitted his resignation as public utilities commissioner to President Truman Sept. 19 to engage in the practice of law in Washington. He began his law career there in 1936, served as assistant corporation counsel for the District of Columbia from July, 1938 to March, 1940, and then became an examiner for the CAB.

In September, 1943, Reilly became executive assistant to L. Welch Pogue, chairman of the Civil Aeronautics Board, and served in that post until his appointment to the Public Utilities Commission in July, 1944.

Wright Wins Guggenheim Award for Production Job

Theodore P. Wright, CAA Administrator has been selected to be awarded the Daniel Guggenheim Medal for the year 1945, it is announced by Dr. G. W. Lewis, Chairman of the Board of Award. The award citation for Dr. Wright reads as follows: "For outstanding contributions to the development of civil and military aircraft, and for notable achievement in assuring the success of our wartime aircraft production program."

The Daniel Guggenheim Medal was created for the purpose of honoring persons who make notable achievements in the advancement of aeronautics. Provision for the Medal was made in 1928 by the gift of a fund from the Daniel Guggenheim Fund for the Promotion of Aeronautics.

Wright's achievements in the military aircraft production program as a member of the Aircraft Production Board and as director of the Aircraft Resources Control Office contributed largely to his being selected for the Guggenheim award. For the same achievements he received the War Department's award to civilians, the Medal for Exceptional Civilian Service.

Five Lines Sign Contracts For Lockheed Constellation

Bulk of Equipment Will Be Used in Over-Ocean Flying

FIIVE airlines, including a foreign-flag carrier, last fortnight signed contracts totaling more than \$70,000,000 with Lockheed Aircraft Corp., for delivery of more than 80 Constellations.

Largest purchaser was TWA with 36 Constellations at a cost of \$30,000,000. Jack Frye, TWA president, said his company had prior delivery rights because it had exclusively developed the aircraft, and TWA therefore would receive the first 12 off the production lines. After that Constellations will be released to other lines.

Next largest purchaser was Pan American with 23 for an order totaling \$17,000,000. Twenty-one of the craft were earmarked for service in the North Atlantic, Pacific, Alaska, Caribbean and South American Service. Two Constellations will go to Pan-American-Grace Airways.

Pan Am said is expected to receive the first Constellation in November, the entire fleet by the first of the year.

Eastern Air Lines ordered 20 Constellations, announced it would maintain such schedules as 45 minutes running time between Boston-New York, less than an hour from New York to Washington, and three hours flying time between New York and Miami. The four-engine transports also will go into service on Eastern's Latin American runs if it certificated for such routes by the CAB, a company announcement said.

American Export was the fourth of the U. S. carriers to announce contracts for the Constellation. Its order was for six Constellations at a cost of \$6,000,000, with delivery expected in January or February. In the interim, Amex said that Douglas C-54s would go into service on the North Atlantic run on or before Oct. 15, replacing present flying boat equipment.

KLM, Royal Dutch Airlines, announced that it had ordered four Constellations, with delivery expected next March. The

Dutch carrier will utilize the aircraft on its projected transatlantic route.

(Also worthy of note, equipmentwise, was the announcement by National Airlines that its board of directors had approved negotiations with Douglas Aircraft Co., looking toward the purchase of 11 DC-6s at an approximate cost of \$7,500,000.)

Frye used the Constellation contract announcement as the springboard for a campaign obviously directed toward lowering transatlantic fares, as well as speeding up TWA's transatlantic schedules. Coast-to-

coast schedules would be pared to 10 hours with Constellations, he said.

Similar cuts would be made in transatlantic schedules, he said, thus permitting "a substantial reduction in fares." He promised further details soon.

Meantime, TWA was losing no time in getting its transatlantic commercial operation underway. An inspection party headed by T. B. Wilson, chairman of the board, has been in Europe for a fortnight, and then on Sept. 20 a C-54E bearing TWA insignia took off from Washington's National Airport to carry another party of technicians on a survey flight of the route to Cairo.

The aircraft bore TWA's new insignia—Trans World Airline. It was one of six which recently was allocated to the carrier from military surplus to be used for the international route. The survey flight was to go to Cairo via Foyne and Paris, and will return via Lisbon and the Azores.

RFC Changes Surplus Sales Policy to Permit Discounts

Price Reductions Amount to 20% for Primary Trainers

DEALERS and air service operators under contract to the Reconstruction Finance Corp. for sales of surplus light aircraft, for some time resentful because they were denied exclusive sales franchise rights and discount rates in the original negotiations, have been mollified with the RFC's announcement of a new sales plan containing price reductions for purchasers of three planes at a time. The reductions apply on any number subsequently purchased.

The price reduction amounts to 20% for primary and basic trainers, of which 2700 and 70, respectively, have already been sold by the RFC since April 6 when fixed price sales were first started. For Cessnas, of which nearly 400 have been sold, the reduction will be 15%. The primary trainers brought a total return of more than \$2,900,000 while the Cessnas brought a return of \$3,184,175.

In addition, the RFC is reexamining the craft with a view to adjusting list prices to make allowances for their condition and probable cost of repairs. Allowance for ferrying of 27 cents a mile will be continued, but this is not to exceed a total of \$90 per craft. The allowance applies when three or more aircraft are purchased at one time from an RFC storage depot. An ex-serviceman may purchase only one of these planes and receive the quantity price reduction, if it is for his own use, under a policy of giving the veteran special preference.

The RFC desires to expedite removal of all craft now located at the 41 RFC sales centers which are operated under contract and which will be closed as rapidly as the planes are sold. Present contractors will be given the chance to obtain as many of the planes as they wish for reconditioning and resale.

The revised policy followed conferences with members of the aviation industry and others. It admits that the Government cannot provide the distribution and sales organization necessary to reach all prospective purchasers without considerable expense. Such an organization, the RFC believes, already exists among hundreds of aircraft dealers, service operators, and others who have the needed facilities and experience to service and sell the planes.

The RFC stressed that no special qualifications are necessary to be eligible for the reduction on quantity purchases. The requisite number to be purchased was placed low to encourage wide participation.

There are 632 primary trainers at RFC-dealer sales centers, and an additional 3000 at storage depots. Basic trainers at sales centers number 128; over 6000 are at storage depots. The RFC has 134 twin-engined Cessnas at sales centers, and 2027 in storage.



Transport Conversion—The Short Stirling pictured here is another of the British bombers which is undergoing reconversion as a passenger-cargo transport. This four-engine, midwing cantilever monoplane is powered with four-Bristol Hercules XVI air-cooled engines. It will carry 18 passengers plus baggage, 1300 lbs. of freight and 3600 lbs. of mail for 1300 miles at an approximate speed of 207 mph. Two versions are being built—one for passengers and cargo, the other for an all-cargo aerial freighter. (See INTERNATIONAL, P. 30).

Aireon presents: the answer to radiotelephone communication for small airports

- Push-button controlled
- Experienced operators unnecessary
- Designed for any climate

In background:
The new Aireon Type 574A Radiophone Transmitter mounted in welded steel cabinet measuring only 22" wide x 22" high x 14" deep. Also available in standard relay rack mounting. In foreground: Transmitter and receiver control unit, mounted in table-top cabinet.



THE Aireon Type 574A Radiophone Transmitter is a completely self-contained, automatically operated unit specifically designed to meet the requirements of the small airport. Rated at 50 watts output, and readily portable, it also makes an ideal emergency transmitter or, by the addition of a low-frequency channel, a control tower transmitter.

The transmitter can be operated by regular personnel, as all tuning adjustments and components are safely covered by a locked front door. Control circuit design renders the actual operation extremely simple. Channel selection is accomplished with mechanically interlocked push buttons. The unit can be remotely controlled up to distances of 10 to 25 miles over an ordinary telephone circuit.

Though eleven tubes are used, they are confined to three readily obtainable types. This avoids the necessity of carrying a large supply of tubes in service stock. Electrical components conform to recognized standards such as ASA and JAN.

Special consideration has been given to insure satis-

factory operation in tropical climates by protecting components against moisture. Each of the five chassis can be quickly unplugged and removed from the cabinet without the use of tools, thus simplifying servicing.

The Type 574A Transmitter is equipped with two frequency channels for alternate operation — 200 to 400 kilocycles and 2.0 to 16.0 megacycles. Single channel, fixed-tuned companion receivers are also available.

Write today for descriptive literature, prices and delivery dates.

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MANUFACTURING CORPORATION
Radio and Electronics • Engineered Power Controls
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KANSAS CITY • BURBANK

F U. S. Airlines Now Have 433 F Transport Craft in Service

Number is 74 More Than Were Used Domestically in 1939

FTHE 16 U. S. Airlines which operate principally within the continental limits of the country now have 433 transport type planes, according to figures obtained from the Civil Aeronautics Board as of Sept. 15.

During 1939 when the airline fleet reached its prewar peak, there were 359 planes in use in domestic operations, or 74 less than the number which are available today. A considerable number of the 433 total are in the process of conversion from military to commercial airline versions.

The Surplus Property Board allocated 20 Douglas DC-3 types to the airlines Sept. 13 which are included in the above totals. That allocation was as follows: Braniff, 1; Colonial, 1; Continental, 2; Delta, 1; Eastern, 3; Northwest, 3; PCA, 2; TWA, 3; United, 3 and Western 1.

National Air Races To Be Held In Cleveland

The National Air Races in Cleveland, O., last held in 1939, will be resumed next summer, according to Albert J. Weatherford, Jr., president of the Weatherford Company and vice president of the Cleveland Chamber of Commerce. Plans for the cooperation of the Army and Navy Air Forces in the meet have been discussed with General Ira C. Eaker, Deputy Commander of the AAF, and Vice Admiral Marc A. Mitscher, Deputy Chief of Naval Operations (Air).

It is expected that one event of the three-day exhibition will feature jet aircraft. The Air Races will also be a feature of the Sesquicentennial anniversary which Cleveland will celebrate during 1946.

Lifting of Priorities

Brings Rush For Seats

Airlines report a rush for seats by civilians since the Sept. 15 deadline on the military priority system when four former classes were reduced to a single priority. It was believed that many of the military were using other travel media in lieu of attempting to obtain the priority now needed.

Less than three percent priority travel was registered by Continental Air Lines Sept. 15, according to Donald A. Duff, general traffic and sales manager for the company. Only 11 of the first 392 passengers boarding its planes on opening day were traveling on priority.

United Air Lines estimates that 90% of its seats will be available for civilian travel. Recently 65% of passengers have had priorities. TWA reported that its New York office had to find space for 80 priority passengers that night before the new ruling became effective. Air express, similarly, has experienced a sharp

Panagra received two Douglas DC-3 types in the same allocation.

In the foreign allocations, Indian National Airways received one DC-3 type and French Military Airlines received a C-60 Lodestar.

Today 230 DC-3 type aircraft have been allocated through surplus procedures of which U. S. carriers, including international operators, received 161, and foreign carriers, 69.

A breakdown of the distribution of equipment between the airlines from Jan. 1, 1942 until Sept. 15, 1945 is given below:

Seek U. S. Crews

At least one foreign airline will hire American flight crews for trans-Atlantic air service. SILA, the Swedish international airline which has already had preliminary survey flights between Stockholm and New York, expects to employ four American flight crews consisting of pilots, navigators and radio operators. But they want no one with less than 3,000 hours flying time, and preferably those with trans-Atlantic experience. It is understood that another foreign carrier, KLM, Royal Dutch Airlines, will also employ some American crews.

	Aircraft owned Dec. 31, 1941		Aircraft requisitioned for military service	On hand after requisitioned by U. S. in May, 1942		Aircraft now available for commercial service
	No.	Type		No.	Type	
American	15	DST	15	DST		89 DC-3
	64	DC-3	21	DC-3	43	DC-3
Braniff	11	DC-3	4	DC-3	7	DC-3
	5	DC-2	5	DC-2		
C & S	6	DC-3	2	DC-3	4	DC-3
Colonial Airlines	4	DC-3	3	DC-3	2	DC-3
Continental	6	Lodestar	3	Lodestar	3	Lodestar
Delta	5	DC-3	1	DC-3	4	DC-3
	4	Electra	4	Electra		
Essair, Inc.	0		0		0	3 Electra
Eastern	35	DC-3	15	DC-3	20	DC-3
	5	DST	5	DST		49 DC-3
Mid - Continent	4	Lodestar	2	Lodestar	2	Lodestar
	5	Electra	5	Electra		6 DC-3
National	3	Lodestar	2	Lodestar	3	Lodestar
	2	Electra				14 Lodestar
Northeast	3	DC-3	1	DC-3	2	DC-3
	1	Electra	1	Electra		7 DC-3
Northwest	11	DC-3	4	DC-3	7	DC-3
	4	Electra	4	Electra		26 DC-3
PCA	18	DC-3	12	DC-3	6	DC-3
	4	247-D	4	247-D		26 DC-3
TWA	8	DC-2	3	DC-2	25	DC-3
	21	DC-3	8	SDT		60 DC-3
	8	SDT	5	B307		5 B-307
United	39	DC-3	6	DC-3	33	DC-3
	15	DST	14	DST		76 DC-3
	13	247-D	13	247-D		
Western - Inland	5	DC-3	2	DC-3	3	DC-3
	2	DST	2	DST	2	Lodestar
	10	247-D	10	247-D		14 DC-3
Total by types	37	DST	36	DST	156	DC-3
	8	SDT	8	SDT	10	Lodestar
	222	DC-3	71	DC-3		21 Lodestar
	13	DC-2	8	DC-2		
	13	Lodestar	5	Lodestar		
	16	Electra	16	Electra		3 Electra
	27	247-D	27	247-D		5 B-307
	5	B-307	5	B-307		404 DC-3
Grand Total	341		176		166	433

drop in priority shipments.

The carriers are doing a brisk business in telephone requests for information and seats, with many reservations being made for Thanksgiving and Christmas.

Collier Trophy Committee Named by Enyart of NAA

The National Aeronautic Association, through its president, William R. Enyart, this week announced membership of the Robert J. Collier Trophy Committee to determine the recipient of the 1944 award for the outstanding contribution to aviation. The committee's first meeting will

be held Oct. 8, and the award will be made on Dec. 17.

Chairman of the committee is Dr. George W. Lewis of the NAA. Other members are Eugene E. Wilson, vice chairman, president of Aircraft Industries Association; William F. Redding, Denver; John Paul Jones, Des Moines, Ia.; Jacqueline Cochran, member of the Northeast Airlines' Board of directors, former director of the WASP; Roscoe Turner, president of the National Aviation Trades Association; Sheldon B. Steers, director of aeronautics for Michigan; Major Lester Gardner, Institute of Aeronautical Sciences; General of the Army H. H. Arnold, Commanding General, USAAF; Stuart Tipton, acting president of the Air Transport Association, and Capt. Luis de Florez, U.S.N.R., recipient of the trophy for 1943.

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FIRST OF THE SUPER-TRANSPORTS BOEING'S NEW STRATOCRUISER

- Product of a wholly fresh concept of basic aircraft design, the Boeing Stratocruiser opens a great new era in air transport.
- The military prototype of this airplane, the Army's C-97 transport, broke all existing speed records on its first coast-to-coast flight. It flew the 2323 miles from Seattle to Washington, D. C., in 6 hours, 3 minutes and 50 seconds, at an average speed of 383 miles per hour.
- But even more significant than speed are the Stratocruiser's other characteristics — its extraordinary versatility, payload capacity and low operating cost — results of Boeing's broad experience and aggressive engineering thinking. The following pages show what the Stratocruiser is equipped to do.



LOW COST OF OPERATION

In the Boeing Stratocruiser, high aerodynamic and structural efficiency, ease of maintenance and rapid-loading features all contribute to economical operation. A high ratio of useful load to gross weight means less operating cost per unit of payload. And high cruising speed makes possible more trips in a given period, distributing all fixed costs over more passenger-miles and ton-miles. This airplane can operate profitably even when carrying less than 20 per cent of payload capacity at present airline rates.

OUTSTANDING PERFORMANCE

One of the reasons why the Stratocruiser so far outperforms competitive airplanes is the Boeing 117 wing, which enables it to do more work for its weight and size than any other transport. High wing loading and low gross weight per horsepower make possible faster cruising speed and greater all-around performance. In addition, it is cleaner aerodynamically than any comparable aircraft.

A PROVED AIRPLANE

The Boeing Stratocruiser is not a "paper airplane." It is a flying airplane, with "bugs" eliminated through extensive tests of the military prototype. After its cross-continent





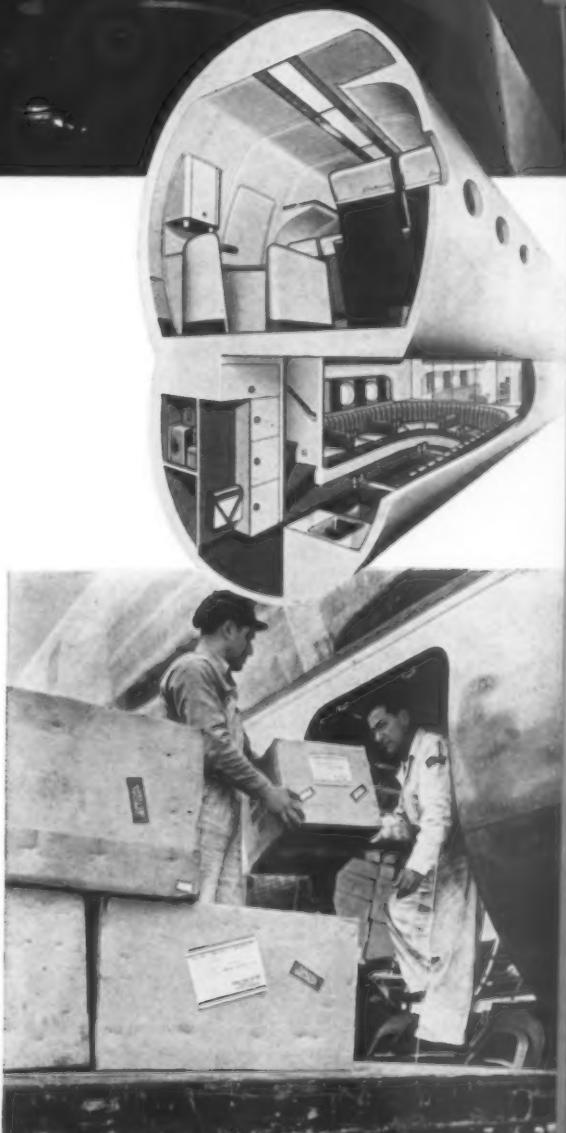
flight, faster than any other aircraft had ever made the trip, it landed at Washington without a single item requiring maintenance attention. Newest member of the famous Boeing 4-engine family, which includes the Flying Fortress, Stratoliner and Clipper, it embodies many advances war-tested in the mighty Boeing B-29 Superfortress.

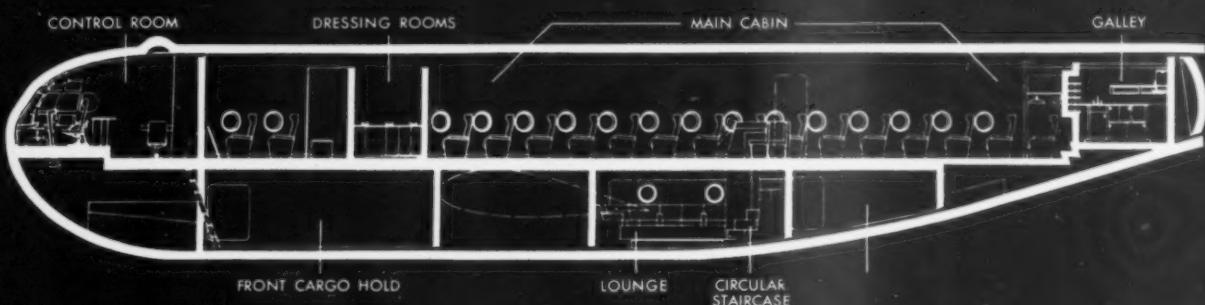
SAFETY AND RELIABILITY

The design of all the Stratocruiser's structural and mechanical elements gives exceptional stamina without increasing airframe weight. Superior safety is assured as a result of its unusual ease of control, pilot visibility, stability, good stall warning and excellent stall characteristics, thermal anti-icing and other advancements. New war-developed electronic devices will be available for installation, making possible safest operation both in landing and in flight. Additional safety is provided by high-altitude performance, allowing normal flight above storms, even with one engine inoperative.

GREATER UTILITY

The Stratocruiser's two-deck, three-cabin design permits adaptation to all types of operation—cargo, high density passenger traffic or luxury travel. Some of the possible





FACTS ABOUT THE BOEING STRATOCRUISER

More than any other post-war transport, the Stratocruiser offers:

- 1 Higher performance
- 2 Greater economy
- 3 Proved ability
- 4 Highest standards of safety
- 5 Greater versatility
- 6 More work capacity
- 7 Added passenger comfort
- 8 A better background of transport and combat airplane experience

... and its prototype is actually flying today.

variations are: 114 passengers and cargo; 81 passengers and cargo; 75 passengers or 28 berths, 19 seats, lounge and cargo; 72 passengers and two cargo holds; or all cargo. This airplane provides exceptional operating economy for both short flights of 300 miles and long-range transoceanic service. On long flights it can carry both a full fuel load and large payload. At short range, the large interior volume permits maximum payload.

EASE OF MAINTENANCE

Ground service maintenance on the Boeing Stratocruiser is highly simplified. The two-lobe construction allows easy access to all tubing, electrical and control assemblies. Power-plants are quickly removable, or accessible without removal for inspection or adjustment. All four units are interchangeable, simplifying overhaul and engine change procedures.

PASSENGER APPEAL

The Stratocruiser offers unprecedented passenger comfort. Its spacious interior provides more room for large, easy seats, a lounge, excellent galley and lavatory accommodations, and greater freedom of movement. High wing-loading and high speed tend to smooth out air bumps. Pressurized throughout, the airplane maintains comfortable atmospheric conditions inside the cabins at all altitudes. Ground level pressures can be retained without change up to 15,000 feet, eliminating ear-discomfort in ascent and descent. Insulated against noise and vibration, it is one of the quietest transports ever built.

BOEING

DESIGNERS OF THE B-29 SUPERFORTRESS • THE FLYING FORTRESS • THE NEW STRATOCRUISER
THE KAYDET TRAINER • THE STRATOLINER • PAN AMERICAN CLIPPERS

Soviets Plan Airline to U. S., Says Air Chief

Statement Indicates Russia May Relax Aviation Policy

By FRANK M. HOLZ

THE Soviet Union plans to establish an airline to the United States by way of western Europe, it was announced in a Moscow radio broadcast by Air Marshal Astakhov, chief of the central administration of the Soviet Civil Air Fleet.

This statement was interpreted by observers as a sign that the U.S.S.R. will relax its "stand aloof" air policy followed since withdrawal from the Chicago Conference last winter. The Soviet Government has made no statement that U. S. air transport companies would be allowed to operate to Soviet territory, but it is assumed that plans for operations to the United States imply the granting of reciprocal rights.

Soviet observers were present at the third Commonwealth and Empire Radio for Civil Aviation Conference—the so-called CERCA Conference—recently held at the Air Ministry in London. Although specialist officers of the U.S.S.R. military and trade missions attended in "their individual capacities", according to London reports, this participation was also taken as a sign of increased Soviet interest in international aviation matters.

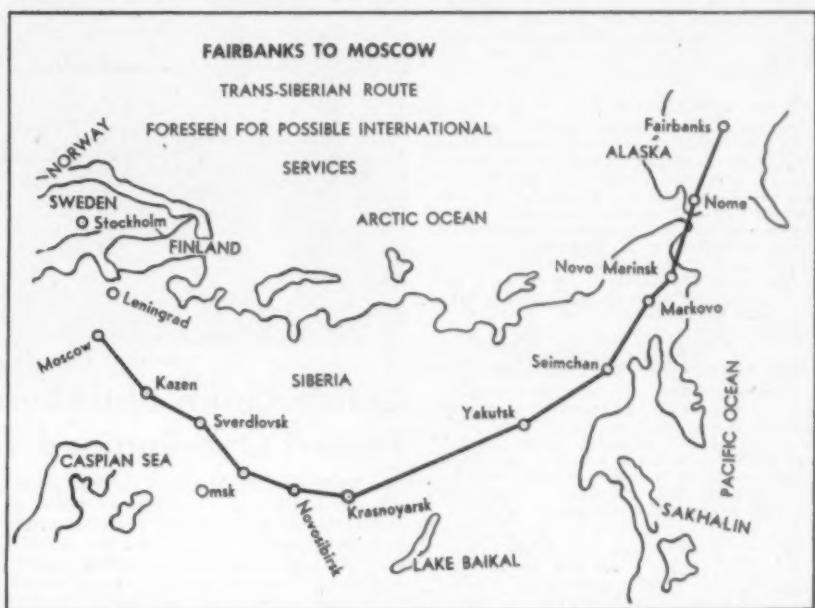
An additional indication of Soviet interest is an announcement in the newspaper *Izvestia* of September 12 that an international airline had been established by the Russians between the United States and the U.S.S.R. by way of Siberia and Alaska. The statement subsequently proved to be inaccurate. The Department of State, the Civil Aeronautics Board, and the Soviet Embassy each deny any knowledge of the announced service.

The *Izvestia* announcement may have been a Soviet "feeler" to test the reaction in the United States. Or it may well have been the result of a writer's misinterpretation of some of the many wartime flights across Alaska and Siberia for military, diplomatic, and scientific purposes.

One of the latter flights was made recently by a party of U. S. and Canadian scientists who attended an anniversary meeting of the U.S.S.R. Academy of Sciences in Moscow. The group was flown in a Soviet-operated C-47 from Fairbanks across Siberia along what is believed to be the main trans-Siberian supply and transport route. This route has been reported as follows: Novo Merinsk, Markovo, Seimchan, Yakutsk, Krasnoyarsk, Novosibirsk, Omsk, Sverdlovsk, Kazan, Moscow.

A member of the scientific party, Dr. Harold A. Innis of the University of Toronto, publicly commented that, although there were longer hops and fewer ground installations than in the U. S. and Canada, this experience with Soviet air transport showed good planning and skillful operation.

It is believed that facilities of the trans-Siberian route were greatly improved and expanded for the ferrying of military and transport aircraft to the eastern front. As it was developed for the purpose of handling traffic between North



American and European Russia, the route may well represent the path of trans-Siberian U. S.-Moscow scheduled airlines if and when such services are established. There has been no indication whether the Soviet Government intends to operate services to the United States by both a transatlantic service, for which plans were announced by Air Marshal Astakhov, and a trans-Siberian service, as prematurely announced in *Izvestia*.

Fairey Establishes Helicopter Section

Indicative of increasing British interest in helicopters, Fairey Aviation Co. has established a new helicopter section, to which it recently appointed Wing Commander R. A. C. Brie. One of Britain's few helicopter experts, Brie has done much pioneering work on rotary wing aircraft. He was a personal friend of the late Don Juan de la Cervia, inventor of the autogiro.

Radar for Aerial Mapping

The war's best known electronic development will be used in an aerial survey to be undertaken shortly in Australia by the Department of Interior and the Royal Australian Air Force. Radar will be used to control the shutters of the aerial cameras so that the exact position of the aircraft and details of landscape photographs can be matched. Shots will cover an area of 200 square miles, but the extremities of the picture coverage will be fixed accurately to within 17 yards.

Iraq to Form Airline

It is reported from England that Iraq State Railways have concluded an agreement with the British Overseas Airways Corporation for assistance in establishing domestic air services, the first of which is expected to start this month. BOAC has undertaken to provide aircraft, crews and a manager for the new airline, and will train 12 Iraq pilots annually.

Asian Air Associates

Rusti Mistri, head of Asian Air Associates, is at present in England making arrangements for his company to participate extensively in Indian civil aviation. The company is bidding for permission of the Indian Government to operate a number of scheduled services in the

country's expanding air transport which, government officials predict, will soon reach 7½ million plane-miles per year. Asian Air has ordered eight aircraft from Miles Aircraft Ltd., and will begin charter services soon. The company also intends to operate a chain of maintenance and repair bases. Asian Air also is negotiating with British firms for the right to build personal and feeder aircraft and components in India under license.

Flying Dutchmen at Eindhoven

The first meeting of Netherlands glider and sailplane pilots since the German occupation was held at Eindhoven Airport Sept. 8. The meet was sponsored by the Eindhoven Aero Club with the approval and supervision of the Royal Netherlands Union for Aviation.

French-Swiss Airport

Switzerland is reported to have "invited" the French Government to construct an airport on the French-Swiss border near Basle. Even before the war, the Basle airport was found inadequate for commercial airliners and the possibility of an international field had been discussed. The Swiss point out that the French would also benefit from the plan, since the airport would be of equal value to Mulhouse and the rich industrial area of the Upper Rhine surrounding it.

ABA Flies to Switzerland

The Swedish airline Aktiebolaget Aerotransport (ABA) has inaugurated non-stop service between Stockholm and Geneva. Tentative frequencies of one or two trips a week will be increased when traffic warrants it. Converted B-17 Flying Fortresses are used. ABA is already operating scheduled services to Paris via Amsterdam with a converted B-17, and to Warsaw with a DC-3.

New Mexican Airline

The Mexican Department of Civil Aeronautics has granted Alfonso Barrenechea Farias an experimental permit to operate the following routes: (1) Ensenada-Santa Rosalia-Culiacan-Guadalajara-Acabarao-Mexico City; (2) Ensenada-Guaymas-Guadalajara; (3) Guadalajara-Manzanillo-Acapulco.

Piper Representative in Argentina

Frank Sheridan Jonas, chief export representative for South America of the Piper Air-

craft Corp., has been in Buenos Aires to arrange for the importation of Piper lightplanes by several local firms. Jonas also visited the city of Rosario where he conferred with officials of Ronchetti, Razzetti & Cia., a leading import firm. In 1942 this company sold 46 Piper aircraft to the Junta de Aviacion, which was dissolved by the military government after the Argentine revolution of June, 1943.

Short Has Flying Start in S. A.

Short Brothers Ltd., the British manufacturing firm, recently sold two Sunderland flying boats to the Argentine Corporation Sudamericana de Servicios Aereos, and two to the Compania Aeronautica Uruguayana S. A. (CAUSA). With four flying boats sold earlier this summer to the Compania Argentine de Navegacion Doder S. A., Short Brothers have now disposed of a total of eight aircraft in the Rio de la Plata area. It is believed that the company will soon set up a branch office in Buenos Aires to serve the territory of Argentina, Brazil, Chile, and Uruguay.

Prewar Argentine Aircraft Market

In the decade before the war, four countries supplied over 90% of Argentina's imported aeronautical equipment, as shown below. While the U. S. supplied, in money value, nearly a third of the aircraft and nearly a half of the engines and parts, it should be noted that aircraft imported from Germany, France, and Italy had much higher unit values.

	No. of Engines	Aircraft	Units	Parts
United States	32%	135	47%	
Germany	28%	8	16%	
France	19%	15	24%	
Italy	12%	3	11%	
All other countries ..	9%	30	2%	
Total	100%	191	100%	

Brazilian Air Minister in London

J. P. Salgado Filho, Brazilian Minister of Aviation, and five Brazilian Air Force officers visited Great Britain last month as guests of the British Air Ministry, inspecting Royal Air Force installations and many aircraft factories. The party was flown to England in a four-motored York by the RAF.

Eckener Working for French

Dr. Hugo Eckener, head of the Zeppelin Works at Friedrichshafen, is working for a French aviation company on an aircraft for 35 passengers with a range of 2,500 miles. The 67-year-old aeronautical expert stated that 90% of the Zeppelin Works were destroyed during a U. S. air raid in 1944. Before the war he was working on a dirigible that was to fly from Frankfurt to New York in 24 hours. The Nazi government relieved him of his post and stopped the work. Eckener is still convinced that the dirigible provides the cheapest and most comfortable means of air transport.

British Internal Fleet

The recent delivery of four de Havilland D. H. 89A Dragon Rapides brings to 36 the total number of aircraft providing commercial services within the British Isles. Two of the new aircraft went to Jersey and Guernsey Airways, and one each to Isle of Man Air Services and Olney Air Services. The internal fleet comprises two de Havilland Dragons, four D. H. 86 Expresses (4-engined) and 30 Dragon Rapides.

Air Dispatch Offers Rate Under 5c a Mile

Air Dispatch, Ltd., a British internal airline, proposes to operate domestic routes and routes to Paris, Brussels and Le Touquet at a passenger rate of 2½d per mile. At the current rate of exchange this is nearer to four than to five cents in U. S. money, and would make the round trip from London to Paris cost \$16 as opposed to Imperial Airways' pre-war charge of \$18 one-way. Air Dispatch has also completed plans for an "inner circle" route to serve the area within a 50-mile radius of London.



Blackburn Firebrand Mk IV Torpedo Plane.

British Claim Blackburn Firebrand Is Fastest One-Engined Torpedo Carrier

A NEW British shipboard torpedo plane—the Blackburn Firebrand—which is claimed to be "the fastest single engined torpedo carrying aircraft in the world" and "the only single seater torpedo carrying aircraft in the world" was removed from the secret list last week by the Ministry of Aircraft Production.

The Firebrand is a low-wing all metal monoplane with a span of 51 ft. 3½ in., overall length of 39 ft. 1 in., and gross weight including torpedo of 15,600 lbs. It is powered by a Bristol Centaurus radial air-cooled sleeve-valve engine developing approximately 2,500 hp.

The large fin and rudder are placed forward of the stabilizer and elevators. There is a large aircoop under the fuselage, and two additional aircoops which form projections in the leading edge of the wing at either side of the fuselage. The radar housing is likewise located in the leading edge of the wing just inboard of the left wing guns. Very large flaps are provided to permit carrier landings and take-offs, and specially designed dive brakes which limit the dive speed to approximately 350 mph are incorporated in the wings near the leading edge. The outer wings fold back to lie parallel to the fuselage with leading edge uppermost. Provision has been made for the use of rocket assisted take-off.

Armament consists of four wing mounted 20 mm cannon—two at either side of the fuselage—and a single torpedo which is slung externally beneath the fuselage. The wing cannon are fitted on hinged mountings to provide greater accessibility for servicing.

While designed primarily as a torpedo carrier, the Firebrand is also adaptable as a fighter and dive bomber. Performance details have not yet been released.

Danish Plans

P. Kampmann, young chairman of Det Danske Luftfartsselskab (DDL), the Danish national airline, returned home from a visit to England last month. Although unsuccessful in his attempts to purchase aircraft, Kampmann did succeed in arranging for the restoration of DDL service from Copenhagen to London. Because of England's ban on civil flying, still in force at the time of Kampmann's visit, DDL will be under military control while in that country and Danish army pilots will be used. The Danish service will be in addition to the two daily flights of the RAF Transport Command to Copenhagen.

IATA To Incorporate

A petition to incorporate the International Air Transport Association, with head offices in Montreal, has been placed before the Canadian Senate by H. J. Symington, president of Trans-Canada Air Lines, John Cooper (PAA) and John E. Slater (AMEX), of New York.

British Develop Service To Test Ignition Faults

A NEW device which pictorially portrays ignition performance while an engine is running and televises the location and nature of engine ignition faults without direct access to the engine has been developed by D. Napier & Son and British Electric Co., according to the Society of British Aircraft Constructors.

Engine defects are portrayed by means of a picture consisting of a row of peaked figures—one for each spark plug arranged in the firing order of the engine. Perfect ignition gives a steady row of identical figures, but any fault anywhere in the ignition system alters the shape of the figures in a characteristic manner. A faulty plug, for example, affects the corresponding figure, while a defect in the magneto or distributor alters the shape of the entire row. Intermittent defects cause the figures affected to flicker in step with the defect.

The instrument is also said to permit an accurate estimate of the quality of the magneto and plugs, and a forecast of possible breakdowns regardless of whether or not the ignition is performing correctly.

The ignition tester is about the size of a portable typewriter, and can be operated either from 220 v AC mains, or from a 6, 12, or 24 v accumulator as desired. It can be used on aircraft in flight as well as on the ground and can easily be adapted as a switchboard instrument for the routine supervision of a group of engines.



The New National and International Flagship System

AIR TRANSPORTATION is changing the tempo of life.

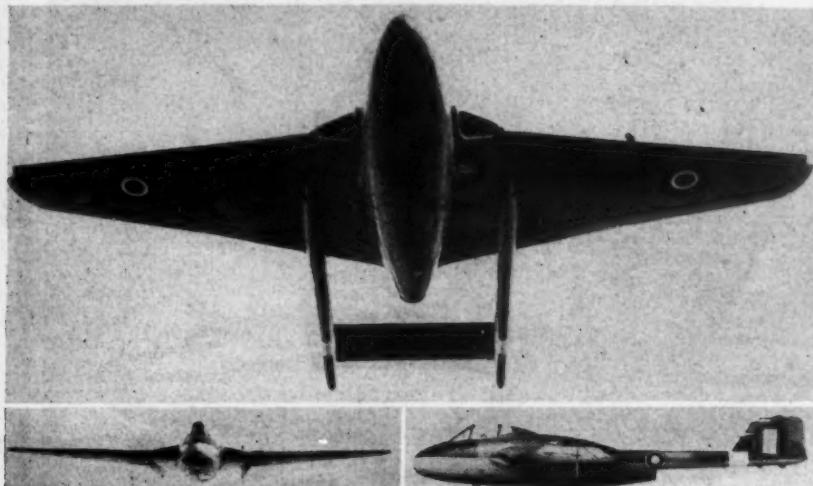
To expand and improve our relationship with other nations we need to utilize the ability of the airplane for commerce and peace. Our government, recognizing this need, has given the American Airlines System the privilege

of engaging in overseas commerce. Thus it becomes one of the principal "American Flag" lines in international air transportation. We are aware of the responsibility on behalf of our country which goes with this assignment. We shall fulfill that responsibility with diligence and sincerity.

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NETHERLANDS • NEWFOUNDLAND • NORWAY • POLAND • RUSSIA • SCOTLAND • SWEDEN • UNITED STATES

AMERICAN AIRLINES *System*

AMERICAN AIRLINES, INC. . . . AMERICAN EXPORT AIRLINES, INC.



British Vampire—Third and latest of Britain's Jet-propelled aircraft to come off the secret list is the Vampire, a single-seater fighter. Speed is said to be "over 500 mph." It is an all-metal monoplane with pressure cabin.

Conversion of Bombers To Transport Speeded

CONVERSION of heavy bombers to passenger and cargo transport proceeds apace in England with the Short Stirling joining the Lancaster and Halifax in a transport adaptation.

The converted Stirling has a design gross weight of 70,000 lbs. and at this weight can carry a total payload of 8,860 lbs. made up of 18 passengers plus baggage, 1,300 lbs. of freight and 3,600 lbs. of mail for a distance of 1,300 mi. at an approximate speed of 207 mph while still maintaining fuel reserve for an additional 2½ hrs. flying time.

The Stirling is a four-engined mid-wing cantilever monoplane powered by four Bristol Hercules XVI air-cooled, sleeve-valve radial engines rated at 1,600 hp each for take-off and driving three-bladed, full-feathering de Havilland propellers. It has a span of 99 ft. 1 in., overall length of 87 ft. 3 in., and height of 22 ft. 9 in. At a weight of 60,000 lbs. it can clear a 50-ft. obstacle on take-off in 3,000 ft., and at 70,000 lbs. it has an initial rate of climb of 650 ft./min. with maximum power, and 470 ft./min. at sea level with maximum weak mixture cruising power.

Two versions are being built—one for passengers and cargo, and the other as an all-cargo aerial freighter. In the passenger version two rows of nine seats each are provided, one at either side of the sound-proofed and insulated cabin. Ceiling lights provide general illumination, with a separate reading light provided for each passenger. The windows take the form of curtained portholes, and overhead racks are provided to handle light luggage. Other passenger service and convenience items include a wardrobe, galley complete with vacuum flasks and other kitchen equipment, and two lavatories. Passenger baggage is stowed in a space between the main wing spars.

The freight compartment has a volume of 124 cu. ft. and is located in the nose. Mail is carried in specially designed containers in the bomb-bays, and provision

is made for up to 24 of these containers. The main passenger entrance is located on the left side of the fuselage, but in the all-cargo version, a separate large cargo hatch will be installed in the right side of the fuselage.

The Society of British Aircraft Constructors reports that the addition of the Stirling brings to 10 the number of four-engined British transport aircraft now available or under construction.

Bernt Balchen Decorated

Col. Bernt Balchen, veteran Polar flier, has been awarded the Legion of Merit for commanding a unit which evacuated 2,000 Norwegians from Sweden by air and parachuted supplies and espionage agents to the European underground.

Portuguese Setup Line For Internal Services

The first Portuguese internal airline has been organized under the name of Companhia do Transportes Aéreos. Carlos E. Bleck, assistant manager of the Lisbon Airport and an officer of Daun and Bleck Ltda., is chiefly responsible for organization of the company and will be its technical director. A major portion of the capital of five million escudos (about \$200,000 U. S.) has been subscribed by leading national firms.

Daun and Bleck, an importing firm which markets British aircraft and equipment in Portugal, has ordered three de Havilland Dominies on behalf of the new airline. The first of these will be delivered this month and used to inaugurate service between Lisbon and Oporto. Later the route will be extended southward to Faro on the Gulf of Cadiz, giving air service the length of Portugal.

Documents of incorporation permit the company to provide air transport "within and beyond national territory", but so far no plans for international operation have been announced. Probably the route in which the new company is most interested is Lisbon-Madrid, but there is some question as to whether this ambition would be regarded with favor by the Portuguese Government. The Secretariado de Aviação Civil, a government agency, plans to operate this route with DC-3s allocated by the U. S. Surplus Property Board. The Secretariado has already made several trial flights between the two capitals, using an interned Douglas C-47 which was bought from the USAAF and converted in Portuguese shops. Aero Português, the only other national air service, operates only the Lisbon-Tangiers-Casablanca route.



North Atlantic Captains Honored

Flight personnel during a recent visit to Montreal. Pictured here are BOAC captains on the North Atlantic ferry service, which has been operating daily between Montreal and Prestwick, Scotland. Standing (left to right) are Mr. Ifould, BOAC liaison engineer with TCA; BOAC Captains Messenger, Allen, Anderson; M. Stewart-Shaw, BOAC station manager, Montreal; Capt. Lang-Stewart. Seated (left to right) Vernon G. Crudge, regional director of the West Atlantic region in Baltimore; Lord Winstor; Lord Knollys, chairman of the BOAC board; Capt. J. C. Kelly Rogers, technical manager, West Atlantic region.

McCarran Airport Bill Passes Senate With Cut

Tough Struggle Seen In House Debate This Month

THE McCarran Federal-Aid Airport bill, which passed the Senate after being reduced from \$500,000,000 to \$375,000,000 and which was further amended to provide for the channeling of all funds through State governments, faces an equally tough struggle in the House when it comes up for consideration this month.

The House is scheduled to consider soon the Lea bill, H.R. 3615, which would appropriate \$700,000,000 over a 10-year period. The Lea bill provides that all Federal funds shall be allocated at the Federal-Local level, with the State governments by-passed completely unless local sponsors elect to deal with the Federal government through their State Aviation agencies.

While these fundamental differences both as to the amounts involved and the method of disbursing the Federal funds point up the battle which lies ahead, the Rules Committee of the House has seen fit to inject still other issues, one of which is expected to be in the form of an amendment providing for the licensing of Feeder airlines. Some members of Congress feel this proposed amendment is not germane although the Rules Committee has ordered the House Interstate and Foreign Commerce committee to write it into the bill.

Bill Was Compromise

In addition, Rep. Charles Halleck (R., Ind.) a member of both the House Interstate and Foreign Commerce and the Rules Committee, raised in Rules Committee discussions the question of who will administer the Federal-Aid airport funds. Under provisions of both bills, this would be left to the Civil Aeronautics Administrator but Rep. Halleck, arguing for the re-constitution of the CAA as an independent agency of the government, says the real administrator will be Henry Wallace, Secretary of Commerce—head of the Department which has jurisdiction over CAA.

The Senate bill, S.2 introduced by Sen. Pat McCarran (D., Nev.) came to the floor of the Senate as a compromise between the positions of the Conference of Governors and National Association of State Aviation Officials on the one hand and the Conference of Mayors and the League of Municipalities on the other. The State leaders sought to have all funds channeled through State agencies, while the municipal leaders, led by Mayors Fiorello LaGuardia, of New York and Edward Kelley, of Chicago, desired to have all funds administered at the local level. The bill placed Class I, II and III airports in the State program, Class IV and V. in the Urban program.

Senators who were former governors, led by Owen Brewster (R., Me.), succeeded in passing an amendment which set up the State government as the agency through which the Federal government would disperse these funds, with 35% of the funds dedicated for use of the larger airports and 65% for the Class I, II and III airfields.

It was an amendment by Sen. Robert A. Taft (R., Ohio), which reduced the amount of the Federal appropriation from

Three Senators Oppose Airport Bill

Three Senators took an active part in opposition to a Federal-Aid airport program when the McCarran bill, S.2, underwent debate last month.

Out and-out opposition was expressed by Sen. Clyde M. Reed (R., Kan.) who said the federal-aid program represented unsound policy and who asserted the air transport industry was already heavily subsidized. He said he would vote against the bill.

Sen. Brien McMahon (D., Conn.) pooh-poohed the idea of building airports in the smaller towns and made much of the fact that one airport, under CAA's National Airport Plan, was to be built on Antelope Island, Utah, inhabited by one family and a herd of moose.

Opposition in the form of a proposal to slash the authorization in half came from Sen. John L. McClellan (D., Ark.) but his amendment was beaten with a compromise amendment offered by Sen. Robert A. Taft (R., Ohio) which reduced the amount from \$100,000,000 to \$75,000,000 a year.

\$100,000,000 a year for five years to \$75,000,000 a year for a like period. Efforts by Sen. John L. McClellan (D., Ark.) to cut the appropriation to \$50,000,000 a year were defeated when Sen. McCarran accepted the Taft compromise.

The bill, as amended in the Senate, provides that the CAA Administrator may deal with the Governor or any state agency designated by him in cases where there are no State Aviation agencies, fixes July 1, 1946 as the date for the beginning of the program instead of "the first day of the first fiscal year of the postwar period" as the original bill was worded, requires the CAA Administrator to request the State aviation agency of each State to submit a recommended plan of airport development for that State, which he may approve in whole or in part, and compels the Administrator to consult with the Federal Communications Commission for the purpose of eliminating, preventing or minimizing airport hazards caused by the construction or operation of any radio station.

Three Days Debate

An amendment by Sen. Brien McMahon (D., Conn.) providing for methods of disposing surplus military airport was withdrawn and introduced later as a separate bill—S. 1398. Under the terms of this bill, a city or municipal unit would have to take title in perpetuity with a provision that the Government could use the facility in time of national emergency. The McMahon bill will be considered as an amendment to the Surplus Property Act.

The bill was passed after three days of debate on Sept. 12, messaged to the House on Sept. 13 and referred to the House Interstate and Commerce Committee. Some move may be made on the floor of the House to substitute the Senate measure for the Lea bill.

Because of the fundamental differences in the philosophies of the House and Senate bills, it is possible that the Conference committee of the two Houses may have to work out a compromise along the lines of the Senate bill if the House bill should pass with no provision for a Federal-State program.

One other basic difference in the two bills relates to the acquisition of land for airport development. Under the terms of the Senate bill, Federal funds, on a matching basis, may be used for the procurement of land and air rights. The House bill provides that the sponsor or

local community shall pay all costs incident to the purchase of land and air rights.

The Senate bill, under the terms of the Brewster amendment, eliminated powers of the CAA Administrator to use Federal condemnation laws in acquiring land where the State lacked such laws. The bill provided that Federal laws could be employed to obtain necessary land only when the State initiated the request for such assistance but some Senators felt this would represent an opportunity for invasion of States rights. The States can pass their own condemnation laws if they desire them, these Senators held.

One Recorded Vote

There was only one recorded vote during the consideration of the bill. States rights Senators cut squarely across party lines to adopt the Brewster amendments by a 40 to 33 vote which gave the States the right to full-fledged participation in the program. The bill passed unanimously on voice vote.

Sen. McCarran, who ably handled the bill during the Senate debate, told the Senate that due to conflicting language, adoption of the Brewster amendments would require a complete revamping of the bill. He said this could not be done on the floor of the Senate, hence it is assumed that conflicts will either have to be eliminated by the House or later in the conference committee of the two legislative assemblies.

It is estimated that actual construction work under the program cannot get underway until 18 months after the bill becomes a law, due to necessary planning and surveys which will be required. This would bring the starting date to the summer of 1947.

MacCracken Heads Legislative Group

William P. MacCracken Jr. was re-elected chairman of the Civil Aviation Joint Legislative Committee at a reorganization meeting held in Washington Sept. 10 when the official name of the body was changed to the Civil Aviation Legislative Council. Other officers named were: William L. Anderson, executive director of the Pennsylvania State Aeronautical Commission, vice chairman; John E. P. Morgan, of the Aircraft Industries

NEW CONCEPT IN AIR TRANSPORT

The Martin 202



Willard Downe

Obsoleting all commercial aircraft of her class, the Martin Two-O-Two provides much higher speeds, more luxurious accommodations and more cargo space than any transport of comparable size. Low direct flying costs and maintenance costs assure profitable airline operation—at fares below first-class railroad rates. Here are some reasons why:

- Cruises at a speed approaching 300 m. p. h.—upward of 100 m. p. h. faster than present day transports.
- On a 250 mile city-to-city hop, direct flying costs, exclusive of operating overhead, are less than one cent per seat mile.
- Carries 30 to 42 passengers—in luxury unsurpassed by even the largest 4-engine air liners flying today.
- Utmost passenger comfort assured by comfortable roomy seats, plenty of head room and leg room, large windows, modern heating, ventilating, sound-proofing and lighting.
- Has far more cargo and baggage space (525 cu. ft.) than any transport of comparable size.

● Three large exterior doors, and two large doors between passenger and cargo compartments, permit swift loading and unloading to cut waiting time at airports.

- Will utilize every new electronic device, including radar, to permit all-weather flying.
- Embodies such improvements as reversible pitch propellers, heat anti-icing, laminar flow wings, tricycle landing gear.
- Flexible Mareng fuel cells cut maintenance costs and contribute to safety.
- Equipment is located below floor, easily accessible for servicing through exterior hatches.

THE GLENN L. MARTIN COMPANY, BALTIMORE 3, MD.



Association, Treasurer, and Lowell H. Swenson, manager of the National Aero-nautic Association, secretary.

The organization adopted new by-laws and redefined its purposes as mainly to provide a media for an adequate discussion and interchange of facts and thoughts which affect civil aviation to the end that there may be intelligent and cooperative planning in the interests of preserving free enterprise and competition within the industry.

Membership in the organization is now composed of the Aeronautical Training Society, Air Transport Association, Aircraft Industries Association of America, American Association of Airport Executives, Aviation Distributors and Manufacturers Association, Early Birds, Feeder Airline Association, Insurance Group, National Aero-nautic Association, National Association of State Aviation Officials, and National Aviation Trades Association. It has been learned that the Early Birds and the Insurance Group may withdraw from the membership of the newly created Council.

McCarran Continues Drive for One Line For Foreign Service

Carrying on under his assertion that the fight would go on, Sen. Pat McCarran (D., Nev.) is understood to be continuing his study of international air transportation policies and may come up with a new single company bill sometime before the first session of the 79th Congress comes to an end.

Special study, it is understood, is being given to the financial formula of S. 326—the McCarran single company bill—which met with some opposition when the original bill was under consideration in the Senate Commerce committee. The bill set up machinery whereby Pan American Airways would surrender its stock and assets to the single company which was designed to represent this country in the field of international aviation, and also stipulated \$5,000,000 as the minimum figure under which domestic airlines could participate in stock purchases in the new company. There were recommendations that the minimum amount should be lowered.

McCarran Moves Slowly

Attention also is being given to suggestions that other forms of transportation, such as railroads, bus lines and steamship companies, should be permitted to buy stock in the single company in an attempt to assure channeling of the principal portion of foreign destined air travel to the new international carrier.

A third phase of the study centers about ironing out any conflicts with existing transportation law, it has been learned.

Sen. McCarran is moving slowly and carefully. He is said to feel that he may have lost some votes in the Senate Commerce committee deliberations on S. 326 because of certain provisions in the bill which were not linked to the fundamental principle of a single community company. Before he re-introduces a bill, he desires to be sure that these differences have been eliminated.

Some sources close to the Senator state that he will not introduce the bill until he is satisfied that there is sufficient sup-

Military Officials Provide Sizeup of Air Requirements

Congressional Committee Told Army Wants Standby Plants

HIGH ranking officials of the Army and Navy have appeared before Congressional committees during the past two weeks to reveal their plans for post-war aviation requirement.

The House Naval Affairs committee has been given more or less specific details of the plans for the postwar Navy. Secretary of the Navy James Forrestal told the committee that the U. S. should have a minimum of about 8,000 naval planes for its postwar fleet, for active and reserve status. He said the postwar Navy should include 15 aircraft carriers (including three 45,000 ton carriers) and 21 escort carriers.

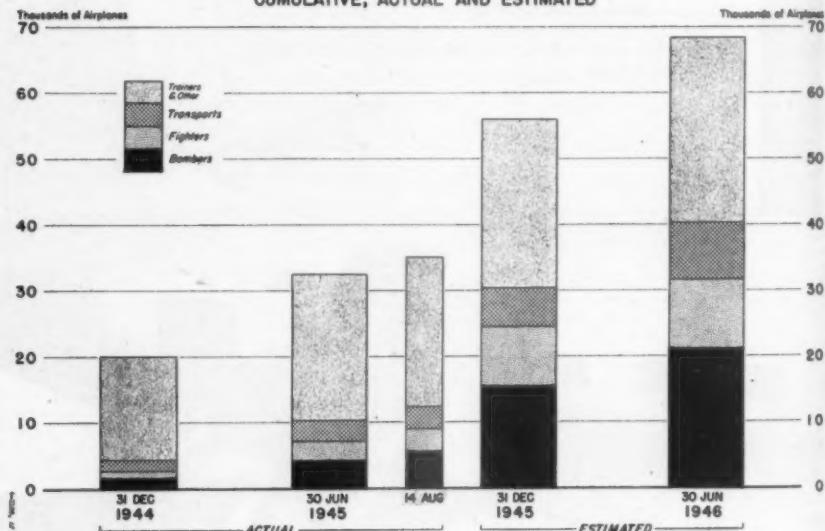
Under Secretary John L. Sullivan supplied the committee with the names of six aircraft factories over which the Navy desired to keep "partial control" in peacetime. While he did not explain how this would be done, he said the Navy would like to "keep a string" on the following plants to meet the possibility of a future emergency: Curtiss Wright Corp., Columbus, O.; Douglas Aircraft Co., El Segundo, Calif.; Grumman Aircraft Engineering Corp., Bethpage, N. Y.; The Glenn L. Martin Co., Middle River, Md.; McDonnell Aircraft Corp., St Louis and the Ryan Aeronautical Co., San Diego, Calif.

Meanwhile before the Deficiency Subcommittee of the House Appropriations Committee, Read Admiral Harold B. Salada, chief of the Navy's Bureau of Aero-

ARMY AIR FORCES

SURPLUS AIRPLANES IN UNITED STATES

CUMULATIVE, ACTUAL AND ESTIMATED



port for it to at least get a favorable report out of the committee. He has been quoted publicly as saying that if he re-introduced the bill, he would attempt to have it referred to the Senate Interstate Commerce committee—a committee of which he is not a member. Because of the jurisdictional fight in the Senate over aviation legislation, several members of Interstate Commerce would welcome the bill.

While some of his close associates doubt he would ask to have the bill referred to a committee other than Commerce, of which he is a member, it is recalled that he did, back in 1938, succeed in getting a bill which later became the Civil Aero-nautics Act away from the Interstate Commerce committee and referred to the Commerce committee—a committee of which he was then not a member.

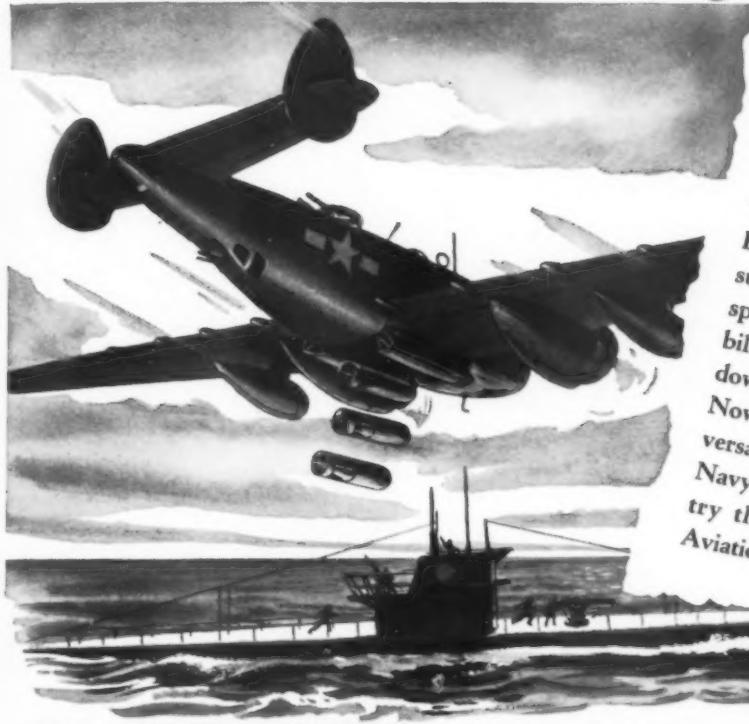
nautics, was trying to convince the committee, in closed sessions, that the re-cision in existing Navy appropriations should be limited to the \$6,135,452,553 recommended by President Truman in a message to Congress.

The Army Air Forces supplied the House Military Affairs Committee with general information regarding the needs of the interim and peace time air forces after discussing in detail the plans and progress that had been made relating to military demobilization.

Lt. Gen. Ira C. Eaker, Deputy Commander, Army Air Forces, said that five government-owned aircraft plants probably would be retained in stand-by condition as insurance against a possible future emergency. He said that while the War Department had decided which plants were involved, announcement could not yet be made as to their location.

"A recent survey of airframe manufac-

Stars in the sky.... the Lockheed

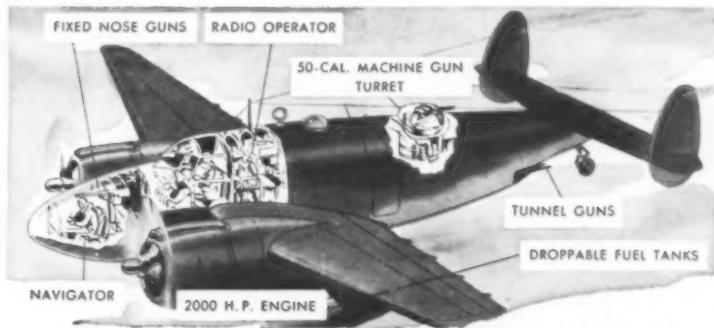


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Aviation Gasoline

This Hit-and-Stun Attack Bomber was designed to be a sub-hunting specialist. But its speed, stamina and maneuverability made it too good to be tied down to patrol work exclusively. Now rated high among the most versatile weapons in the U. S. Navy arsenal, many fleet PV's try their wings on Chevron Aviation Gasoline.



ON LONG SEA SEARCHES pilots of PV's gamble their lives on smooth-running Chevron-tested engines. Designed for combat, this great flying fuel boosts motor performance, cuts detonation danger in civilian aircraft, too.



FROM PARAMUSHIRO to the South Seas, PV's have battered Japs as high-altitude and attack bombers, fighters, sub-hunters, reconnaissance ships. They turn up better than 300 mph, cruise more than 1000 miles. For critical test flights of many of these hard-fighting PV's, Lockheed selects Chevron Aviation Gasoline.



TNT TOKENS delivered to Japs by the PV, "the South Pacific Search Plane," may be 2000-lb. torpedo, six depth charges or six 500-lb. bombs. Additional bombs or depth charges may be substituted for droppable fuel tanks.



TAKE IT FROM TEST PILOTS
—they say Chevron Aviation Gasoline coaxes consistent top performance from aircraft engines. And take it from us —Chevron Aviation Gasoline will do the same for your personal plane . . . and make it, too, a star in the sky.



"Now you see it—Now you don't... a Machine Shop in a Burma Jungle

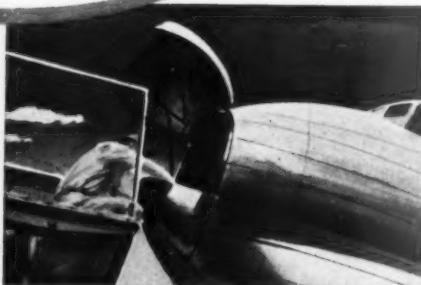


A Zero Strikes... and one of our bombers is down in the wilds of Burma, badly shot up. Repair parts must be had at once! By land routes, it takes weeks or even months to get help in. But there's one chance... an S.O.S. for a flying machine shop. And presto! There it is! A Curtiss Commando, equipped with a complete machine shop... from heavy drill presses to welding equipment... a huge

power plant... spare parts... and a crew of mechanics. In record time, all four engines are purring smoothly. The bomber is ready for another blast at the enemy. And the Commando is off on another rescue flight "somewhere" in the China-Burma-India theater. Here's another reason why pilots say, "When it comes to carrying loads and getting there, it pays to Fly Commando!"

THAT'S WHY
I WANT TO WORK FOR
THE AIRLINES THAT WILL

Fly Commando!



Ace-high Comfort aboard a smooth-flying Commando is sure to delight your passengers, whether they play bridge, dine or just nap. And the Commando's unusual aerodynamic cleanliness, coupled with the power of Wright Cyclone 18 engines, makes it much faster than any of today's airliners.

On the Nose! Flight stops are shorter when you Fly Commando, because the Commando is so much more accessible for easy servicing. Here a mechanic opens the nose cone access door by means of three quick-type fasteners. Through this door, he has ample room to check all units forward of the instrument panel, quickly and comfortably.



Over Six Tons of heavy machines and men are handled easily by this flying machine shop. Think what that will mean for the airlines that Fly Commando! When it comes to carrying greater pay loads... on the medium-range flights which make up the majority of daily airline hops... the Commando will be first on the list of profit-producers.

THE CURTISS

Commando

Today's Great Lifeliner
Tomorrow's Great Airliner

Curtiss



Wright

FIRST IN FLIGHT

turners, conducted by the Aircraft Industries Association of America, indicates that as few as 20 airframe plants, with a total area of about 24 million square feet, will probably be retained for military and commercial production," he told the committee. "We believe the addition of a proportionate amount of space for engines, propellers, and other parts would bring the total area to be used to about 35 million square feet. That area, although three times the prewar area, would be only 14% of the peak wartime level." He said the fact that leading aircraft manufacturers want to return to their prewar locations concerns the AAF.

"Such concentrations as that for the production of airframes in the Los Angeles area, and that for the production of engines in the New York area, are very vulnerable to attack. The development of the atomic bomb does not alter these considerations. It simply increases our concern over the location of aircraft productive capacity," he stated.

Gen. Eaker said that the Army estimated it would need a year from now about 152 of the 412 base and sub-base fields. Announcement of which fields are to be retained will be made about Oct. 15, he stated. The Army, he added, had recommended that the Surplus Board issue a regulation under which the RFC, as the disposal agency, will be able to transfer fields to municipalities or other agencies with provision for their availability to the Armed Forces whenever required. The Board, he said, had not yet acted upon this recommendation.

Policy governing the determination of which fields are to be retained has been agreed upon, with prime consideration given to economy which would mean retention of government-owned fields and secondly to peace time Air Force requirements so as to enable quick deployment of planes to meet any threat of aggression.

Gen. Eaker said a complete program regarding the future and size of the Air Force would be submitted to Congress, hinged about these three principal considerations: (1) Continuance of an experimental and developmental program; (2) Keeping the aircraft industry alive; (3) Maintenance of a nucleus of trained personnel to assure the security of the U. S.

Training of Air Force personnel would be continued roughly on the same basis as during the war, based somewhat on the prewar program but extended and broadened to include training on new weapons and devices.

On the question of disposal of surplus planes, Gen. Eaker said that the Air Forces has reported approximately 4,000 airplanes to the Army-Navy Liquidation Commission as surplus overseas, and expects to declare an additional 8,000 to 10,000 airplanes surplus outside of the U. S. by June, 1946. The 4,000 already declared surplus does not include aircraft salvaged by the Army Air Forces overseas, he said.

Regarding the interim program, he said there were 100,000 Air Force personnel assigned to Europe, 140,000 to the Pacific area at present. The largest amount of procurement for equipment and supplies, other than aircraft, will be for radio and radar to equip the routes which the Army Air Forces must fly after the war with the Loran System, he said.

California Reconsiders State Aviation Setup

The proposal to create a State Aviation Commission and the accompanying office of State Aeronautical Director is slated to be revived at the special session of the California legislature, which Governor Earl Warren is expected to call this fall.

In anticipation of this special session, Col. A. R. Heron, State Director of Reconstruction and Reemployment, has appointed a new State Aviation Project Committee to work in cooperation with the Assembly Airports and Aviation Interim Committee in drafting "urgent aviation legislation."



talk American

GIVE THE TOWER A BREAK!

The American Lip Microphone weighing only 1½ ounces will fully modulate any transmitter having a standard single button carbon microphone input. Ideal for cabin planes. Cuts out ambient noise. Feeds clear articulate signals to the set. Leaves hands free for flying. Not affected by barometric pressure. As easy to put on as eye-glasses.

talk American

The compact utility of an American Hand Set is well established. It has a microphone-relay* push button switch control and is readily adaptable to various voice communication circuits. To get your message thru on land, at sea or in the air—Talk American!

Bulletins Available—
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New Commonwealth Skyranger Gets Flight Tests

Two-Place Craft to Have Improved Speed, Comfort

COMMONWEALTH Aircraft, Inc. announced last fortnight that it expected to complete and fly its first Skyranger on or before Sept. 30. It added that it believes this to be one of the first postwar aircraft to be turned out whose entire fabrication began after Aug. 15.

The new aircraft is based on the pre-war Rearwin Skyranger, but is said to be greatly improved in range, rate of climb, general performance and passenger comfort. It is a 2-place side-by-side high wing monoplane powered by an 85 hp Continental engine, and is expected to have a top speed of 115 mph, cruising speed of 105 mph, and cruising range of 700 mi. A large door provides easy entrance, and an extra large baggage compartment is incorporated.

The craft has a 34-ft. span, 21 ft. 5 in. length and 8-ft. height. Weight empty is 980 lbs. and gross weight 1450 lbs. Service ceiling is given as 14,000 ft. and landing speed at 38 mph. Standard equipment items include starter, battery, generator and lights, two position propeller, trim tabs and wing slots.

While definite price figures are not yet available, the Skyranger is expected to be in the \$2,250-\$2,500 class.

New All-Metal Swift Developed by Globe

The new Swift, incorporating many advances and improvements over the original prototype, was to have been unveiled last fortnight by Globe Aircraft Corp., Fort Worth, Tex.

Outstanding among the many improvements in the production model will be a switch to all-metal construction including the wing and control surfaces, which were wood and fabric respectively on the prototype. Tread width of the retractable main gear will be increased from 7 ft. 6 in. to 9 ft. 9 in., and both flaps and landing gear will be actuated by a combination electric-hydraulic mechanism.

Two versions of the new Swift will be offered, one powered with an 85 hp Continental engine, and the second with a 115 hp Continental engine instead of the 100 hp engine previously announced. The 115 hp engine is expected to assure a cruising speed of 135 mph and possibly 140 mph at 75 per cent Meto power, a take-off run of 600 ft., initial rate of climb at sea level of 850 ft./min. and a service ceiling in excess of 16,000 ft. Globe states that several thousand of the big engines have already been ordered.

Tentative prices for the new Swift have been set at \$3,295 for the 85 hp version, and \$3,450 for the 115 hp version. This latter figure is the same as that previously set for the 100 hp model, which has now been dropped.



New Commonwealth Skyranger

Some 400,000 AAF Men To Seek Aviation Jobs

An estimated 441,000 officers and enlisted men of the Army Air Forces intend to seek jobs in aviation and 87,000 of them intend to buy personal planes, according to a sampling of returnees made at an AAF eastern personnel distribution center.

The Civil Aeronautics Administration, cooperating with the AAF in the survey of returnees' postwar intentions, questioned 1,278 officers and 2,215 enlisted men. Their responses, translated into terms of the 327,000 officers and 1,536,250 enlisted men of the AAF, result in the figures quoted.

The survey revealed also that some 62,000 officers want to remain in the Air Force, but no interrogated enlisted man expressed such a desire. Sixteen percent of the enlisted men expressed the hope they can get jobs in aircraft factories or as airline mechanics. Twelve percent of the officers want to work for themselves in aviation, operating schools or airlines, and 17% would like jobs as pilots on domestic or foreign airlines.

A higher percentage of Air Force men are interested in private flying than are interested in future aviation jobs. Three-fourths of the officers and two-fifths of the enlisted men would like to own private planes sometime after the war. Half of the officers and a third of the enlisted men reported they would buy personal planes immediately after the war if they could afford it.

CAA Advisory Committee To Discuss VHF Radio Needs

The CAA's non-scheduled advisory committee will meet Oct. 17-18 with a discussion of the CAB's examiners' report on non-scheduled flying regulations one of the principal items on the agenda. Other matters to be discussed included proposed revisions of CAR Part 24, rules for certification of aircraft mechanics, and radio in personal aircraft.

The Committee favors improvement in radio facilities for the private flier, and recommendations to the CAA probably will be made to the Federal Communications Commission looking toward the development of very high frequency radio for private fliers.

CAA, CAB Seek to Wipe Out Restrictions on Flying

Efforts of the Civil Aeronautics Administration and the Civil Aeronautics Board to rescind wartime restrictions on private flying have eliminated all but one, and this currently is under consideration by these agencies.

This is the requirement, that none but designated landing areas may be used by private fliers. Only the interdepartmental Air Traffic Control Board can eliminate this restriction and repeated recommendations have been presented to this body by the CAA and the CAB. Once the IATCB lifts the restriction, the CAB can rescind that part of the Civil Air Regulations and the CAA is permitted to halt enforcement. As long as the IATCB restriction remains, however, private fliers attribute it to the CAA which is mandated to enforce IATCB emergency regulations.

Approximately 600 applications are on file with the CAA in Washington for designation of landing areas, and the same lengthy routine must be followed by would-be operators as was required during the active war years.

N. American Contemplates Invading Lightplane Field

North American Aviation is contemplating the invasion of the personal plane field, it became known when it was disclosed the company is completing the mock-up of a four-place, single-engine monoplane at its Inglewood, Calif. plant.

North American's plans, company officials said, still were in the obscure stage and a power plant hasn't even been selected for the proposed ship. However, the company now is engaged in a market study to determine potentialities of personal plane use and is making an economic analysis to determine the sale price for a representative plane of that category. The North American officials said if the company goes through with plans to manufacture the craft the price would be low enough to attract a market.

Maher on Speaking Tour

Frank (Doc) Maher, recently resigned as assistant to Oliver L. Parks, president of Parks Air College, Parks Aircraft Sales & Service and Parks Air Transport, will begin a national speaking tour on Oct. 1. He will talk to business groups on community airpark development.

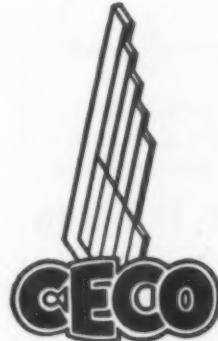


Weekend in Honolulu? *Let's go!*

No fanciful dream on a designer's drawing board is this huge six-engined Clipper. Months ago Pan American placed an order with Consolidated Vultee for a fleet of these sky-giants . . . soon they will become an actuality.

204 passengers and 7 tons of mail and freight will speed non-stop across the North Atlantic to Europe. Daily service to Honolulu and Latin America is part of Pan American's sweeping postwar plan to bring distant places closer than they have ever been before.

These are the types of planes for which Chandler-Evans builds carburetors and fuel pumps. The larger planes — with engines from 400 H.P. up to the big ones needed by this new sky giant — demand the engineering precision and dependability that is built into every CECO product. As it is serving the Liberators, Superfortresses, and other big war planes today, so will Chandler-Evans supply tomorrow's greatest air liners.



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Aeronca Champion Will Sell For \$2095; New Craft Features Greater Visibility

PRICE of Aeronca Aircraft Corp.'s two-place Champion, the company's first newly designed postwar private plane to come off assembly lines last week at Middletown, O., has been announced as \$2,095.

The Champion's standard equipment now includes dual brakes, steerable tail wheel, compass, wiring for navigation lights, cabin heater and an airmaze carburetor intake. The tandem seater has a cruising range of 270 miles, cruising speed

sealed under floor boards. The wings have all-metal, one-piece ribs; the rudder is balanced; fabric of the tail group is attached with metal screws and washers, obviating rib stitching.

Maintenance-wise, the Champion has dual exhaust stacks. It has a positive fuel gauge; the engine controls and tab adjustment are accessible to front and rear occupants. Aeronca's special Oleo landing gear is, as before, standard equipment.



First postwar Aeronca, almost ready to roll off the assembly lines at Middletown, O., is the 65-hp, two-seater Champion shown here. The plane has been entirely redesigned.

of 90 mph, landing speed of 38 mph, wing span of 35 feet, and a 65 hp. engine. Currently produced Champions are being painted yellow and international orange.

The craft has new features which include greater visibility, permitting taxiing from the front seat without S turning; solo control from either seat; gear, wings, tail surfaces, and engine installation are all interchangeable with the Chief, a side-by-side two seater of higher price which will soon parallel the Champion in production.

Additional features include more readily visible instrument panel; built-in tie-down rings; landing gear interchangeable on either side; interchangeable lift and jury strut; control tubes and cables con-

Specifications of the new Aeronca Champion are:

Wing span—35 ft.
 Length—21 ft. 6 in.
 Wing Area—170 sq. ft.
 Wing loading—7.2 lbs. per sq. ft.
 Power loading—18.8 lbs. per horsepower
 Power plant—65 horsepower engine
 Height overall—7 ft. (in 3 point position)
 Top speed—100 mph.
 Cruising speed—90 mph.
 Landing speed—38 mph.
 Rate of climb—500 ft. per minute
 Fuel capacity—14 gallons
 Cruising range—270 miles.

	Seaplane	Landplane
Weight empty	810 lbs.	710 lbs.
Useful load	510 lbs.	510 lbs.
Gross weight	1,320 lbs.	1,220 lbs.



Peacetime Flying Jeep—The new Stinson Voyager, shown here taking-off from the Creede, Colo., flying field, 8,700 ft. above sea level, will be powered with a 150 hp, 6-cyl. Franklin engine instead of the 125 hp engine previously planned, and will be designated as the Voyager 150. Selling price will be \$5,000, and Stinson Division, Consolidated Vultee Aircraft Corp., expects to begin deliveries within 60 days.

Ready: Collins Transmitters for airport applications

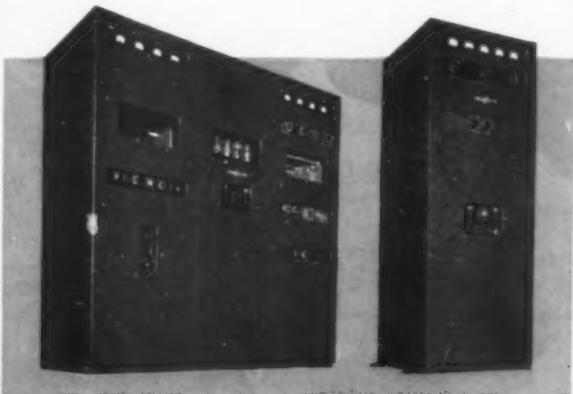
Collins Autotune Transmitters

IN DESIGN AND CONSTRUCTION the Collins Autotune transmitters, shown below, reflect extensive laboratory and field research, and intense engineering endeavor, both before and since Pearl Harbor. The most advanced refinements are combined with military ruggedness on a production line basis!

The Collins Autotune is a repositioning mechanism which quick-shifts all tuning controls simultaneously and with extreme precision to any one of ten preselected frequencies at the flip of a dial, either at the transmitter or from a remote point. The standard models are crystal controlled, and special models are available with tunable master oscillator control.

The renowned Collins pi network matches into a wide variety of single wire or vertical antennas. The 231D-13 also matches into a 600 ohm balanced transmission line from 4 to 18 Mc.

Frequency-shift keying is available, making it possible to use these transmitters in printing telegraph circuits.



Collins 231D-13—Nominal power output: 3000 watts phone; 5000 watts c.w. Frequency range: 2 to 18 Mc. Ten quick-shift frequencies.

Collins 16F-9—Nominal power output: 300 watts phone; 500 watts c.w. Frequency range: 2 to 18 Mc. Ten quick-shift frequencies.

COLLINS RADIO COMPANY, CEDAR RAPIDS, IOWA; 11 W. 42nd ST., NEW YORK 18, N.Y.
Collins equipment is sold in Canada by Collins-Fisher, Ltd., Montreal.



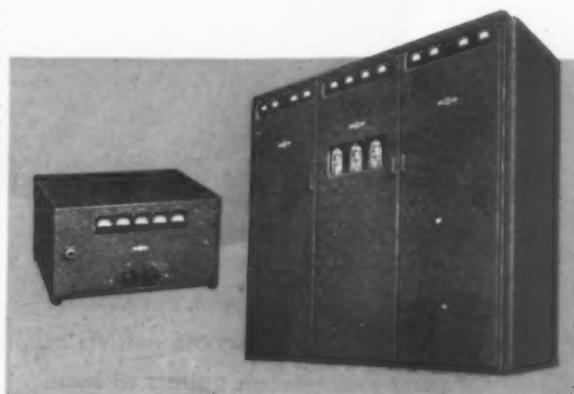
IN RADIO COMMUNICATIONS, IT'S . . .

Collins Multi-channel Transmitters

THE COLLINS 1000-C 2500 watt multi-channel airport transmitter shown at right, below, provides an ingenious balance of quality, efficiency and economy. The radio frequency cabinet contains two vertical r.f. sections. Each section can be used interchangeably on two channels located anywhere within 2 to 20 Mc. The cost per section compares with that of conventional single channel sections. The cost per channel is thus cut approximately in half. In addition, relays permit selection of three crystals per channel (six per vertical section). Twelve frequencies are therefore available in a single cabinet.

The Collins 32RA transmitter shown at left, below, is a compact low-powered crystal controlled unit which finds ready application for continuous duty in control towers, or as a stand-by. Instant selection of any one of four frequencies within its range is accomplished by means of a special gang switch actuated by a single panel control.

Your inquiry is invited. We will be glad to make recommendations for your particular applications.



Collins 32RA—Nominal power output: 50 watts phone; 75 watts c.w. Frequency range: 1.5 to 15 Mc. Four instantly selected frequencies.

Collins 1000-C—Nominal power output: 2500 watts. Frequency range: 2 to 20 Mc. Additional a.f.-modulator & r.f. multi-channel sections available.





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Starters removed at engine change have been repeatedly reinstalled with only a change of brushes. Usually even this may be unnecessary for since the beginning of the war, Jack & Heintz research has increased starter brush life from 500 to 17,000 cycles of operation.

Such performance—all a matter of record—has helped keep more planes on the skyroad to the victory that is now ours. In peace, it means greater safety, longer service life, lower costs.

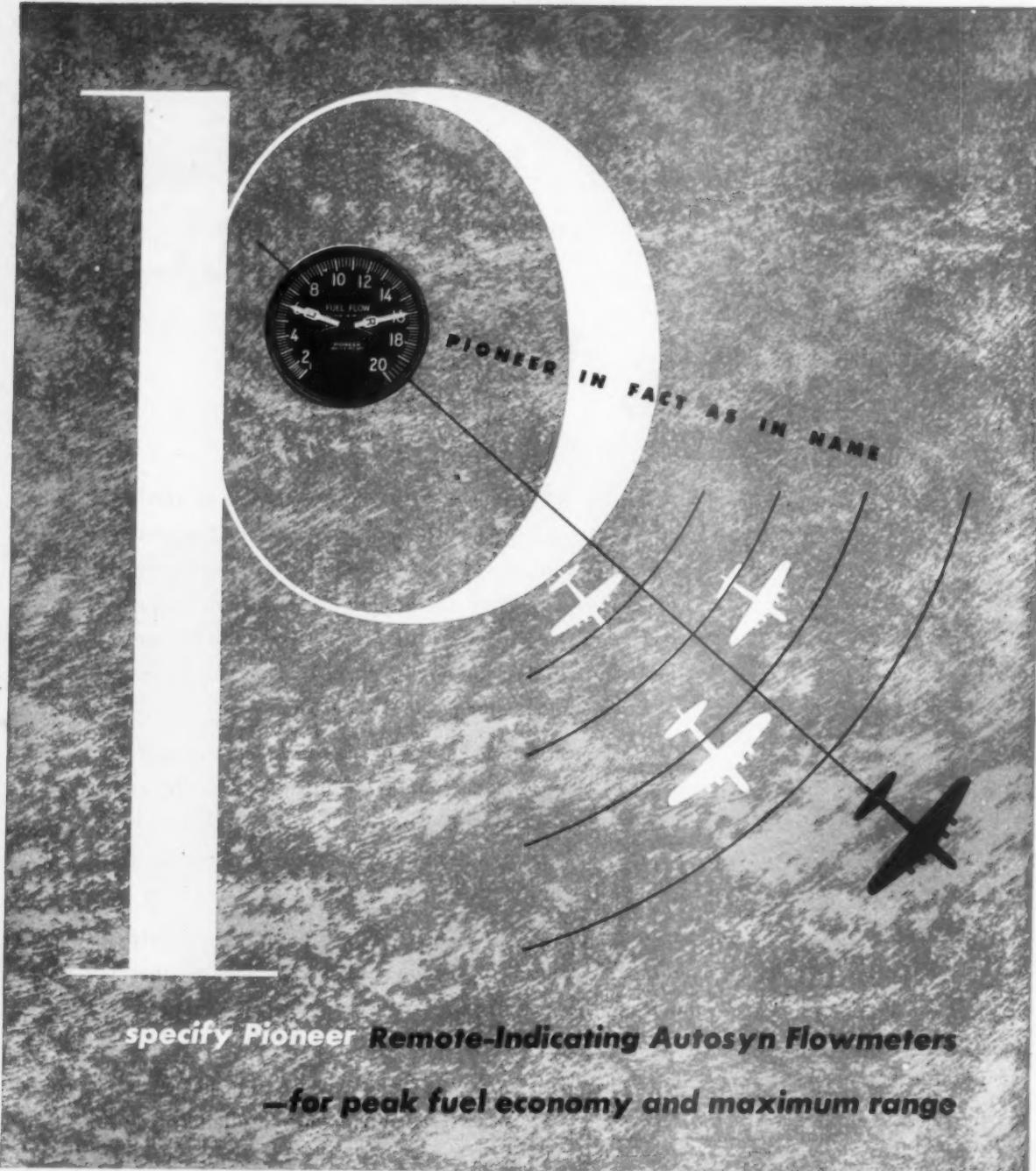
The great new starters that have set such service records are now available for use in civilian aircraft. If you're interested in cutting maintenance costs in your business, write us for complete performance data today!


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foretelling flight range. Tests at altitudes up to 35,000 feet, and over extreme temperature ranges, show no appreciable errors in indication. Advanced design holds pressure drop extremely low—less than 1 psi drop over the entire operating range. (Complete specifications and data may be obtained by writing to the address below.)

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Bulk of Idlewild Revenue to Come from Airlines

Rising Spiral of Charges Noted in Newest Leases

THE RISING SPIRAL of airport charges is pointed up in leases recently signed for the use of New York's Idlewild Field.

New York's Board of Estimate anticipates annual revenues of more than \$3,000,000 for the fiscal year commencing July 1, 1949, and nearly \$4,500,000 for the 1954 fiscal period. The bulk of this revenue comes from direct airline assessment.

Major portion of the revenues will come from rentals for ticket office space in the arcade area, space in the terminal building and from schedule fees. Under terms of the leases signed by the 12 carriers, this is the manner in which charges are made:

For the first, second, and third schedules (departures) from Idlewild, \$200 per month each; fourth through seventh schedules, \$136.36 per month each; eighth through twelfth schedules, \$68.18 per month each; thirteenth and all additional schedules, \$36.36 each.

These charges apply only to aircraft of less than 32,000 pounds standard gross weight. For aircraft above this weight, the carrier will pay an additional charge of 91c per month for each 1000 pounds above 32,000-pound figure, multiplied by the number of composite schedules.

For the fiscal year, 1946-47, New York anticipates collection of \$236,100 from this item alone.

Rentals for space are scaled in this manner: \$200 per year per acre for ground space in the site area (for hangars, shops, offices, etc.); \$200 per year per acre for ground space for fuel storage; \$1.50 per square foot per year for temporary terminal building space.

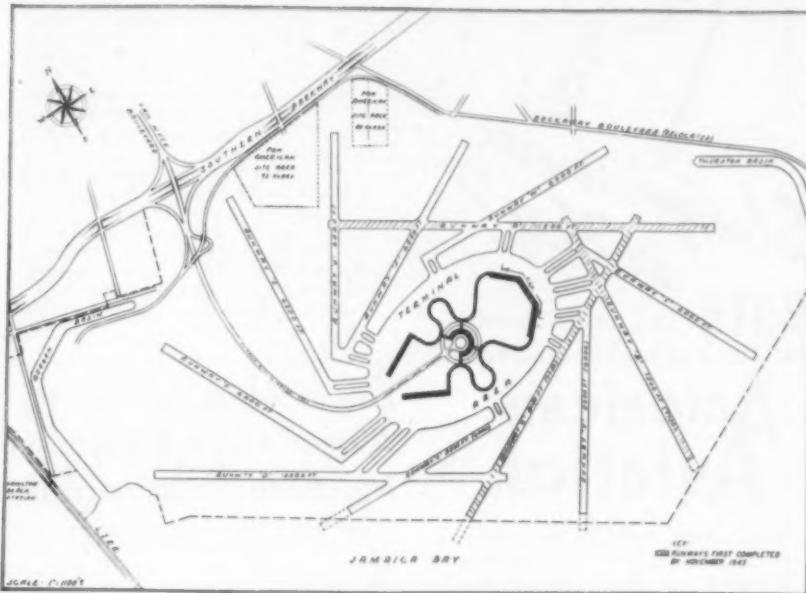
Rentals for space leased in the permanent terminal building is scaled as follows: (All figures are rates per year) ground floor, \$2.50 per sq. foot; first floor, \$5 per square foot; second floor, \$3 per square foot; third floor, \$3 per square foot; fourth floor, \$2 per square foot.

Total rentals to be paid by the 12 carriers, under terms of the present leases, will approximate \$1,350,000 annually.

In addition, the carriers must pay a proportionate share of the cost of control tower personnel furnished by the city, and 10% on the gross receipts derived by the airline or contract carrier in connection with the ground transportation to and from the airport.

Total cost of Idlewild in its initial stage (three runways operative) is \$26,671,000; \$75,845,000 in the intermediate stage (six runways), and \$91,700,000 in its final stage (12 runways). Total charges and expenses including taxes, interest and amortization and maintenance and operation, would amount to \$4,203,650 per year during the intermediate stage and \$5,488,050 during the final stage.

The following table shows general revenue prospects for Idlewild for two future periods:





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WHY? — Because American Aviation heads their "must" reading for straight aviation industry NEWS—as it has for the past eight years.

TODAY, with a circulation of 11,000 key men, American Aviation goes forward maintaining its established leadership—reporting the NEWS of aviation, quickly, accurately and impartially.

AMERICAN AVIATION is an integral part of the industry. It stands ready to help all who have an important message to place before aviation's key men.



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"The Independent Voice of American Aeronautics"

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Airpark Demonstration Cancelled

Contrary to published reports appearing elsewhere, the proposed airpark demonstration scheduled to begin Oct. 1 in Forest Park, St. Louis, will not be held. The St. Louis National Aviation Trades Association Airpark Committee has cancelled the demonstration for unannounced reasons.

The demonstration, as originally planned, was to run for 60 days, to test airpark operation in a congested area. Tentative plans were to include operation of charter flights from the airpark, shuttle service from the field to Lambert Field, the municipal airport, and other activities.

Airport Facilities Financed With Cafe And Club Revenues

WINSTON-SALEM, N. C., a city with a metropolitan population of 109,000, and with but three airline schedules each way each day, has pointed the way to grossing sufficient revenue from restaurant and club facilities to maintain its airport building and grounds.

Although the terminal was opened after the war had started under anything but favorable conditions, the restaurant is grossing \$120,000 a year and paying the airport five per cent on the gross. Charles Norfleet, prominent Winston-Salem citizen and president of the local aviation club, has supplied details of what is considered one of the nation's best-operated airports.

There are 65 seats in the restaurant—cleaner and better decorated by far than most airport restaurants which are usually no more than lunch counters and jukebox joints—and sixty persons can be accommodated in the Sky Club. Recently a private dining room, called the Terrace Room, was opened in the sunken garden.

"The club room is our pride and joy," Norfleet writes. "We rent the Sky Club and deck for \$250 a month. The club maintains its own quarters—redecorating, upholstering, etc., and we serve the food from the kitchen below. It is the most popular club of four in the city and apparently enjoys a good reputation over the country. It is open from 12 to 2 in the day and from 5 to 11 at night. We hope to keep open all day as soon as competent help is available.

"Our policy from the beginning has been to serve good food first and let profits take care of themselves. I believe this policy has paid dividends in good advertising over the country. I don't care how good or how bad your airport is, it is judged largely by the terminal building and the service received."

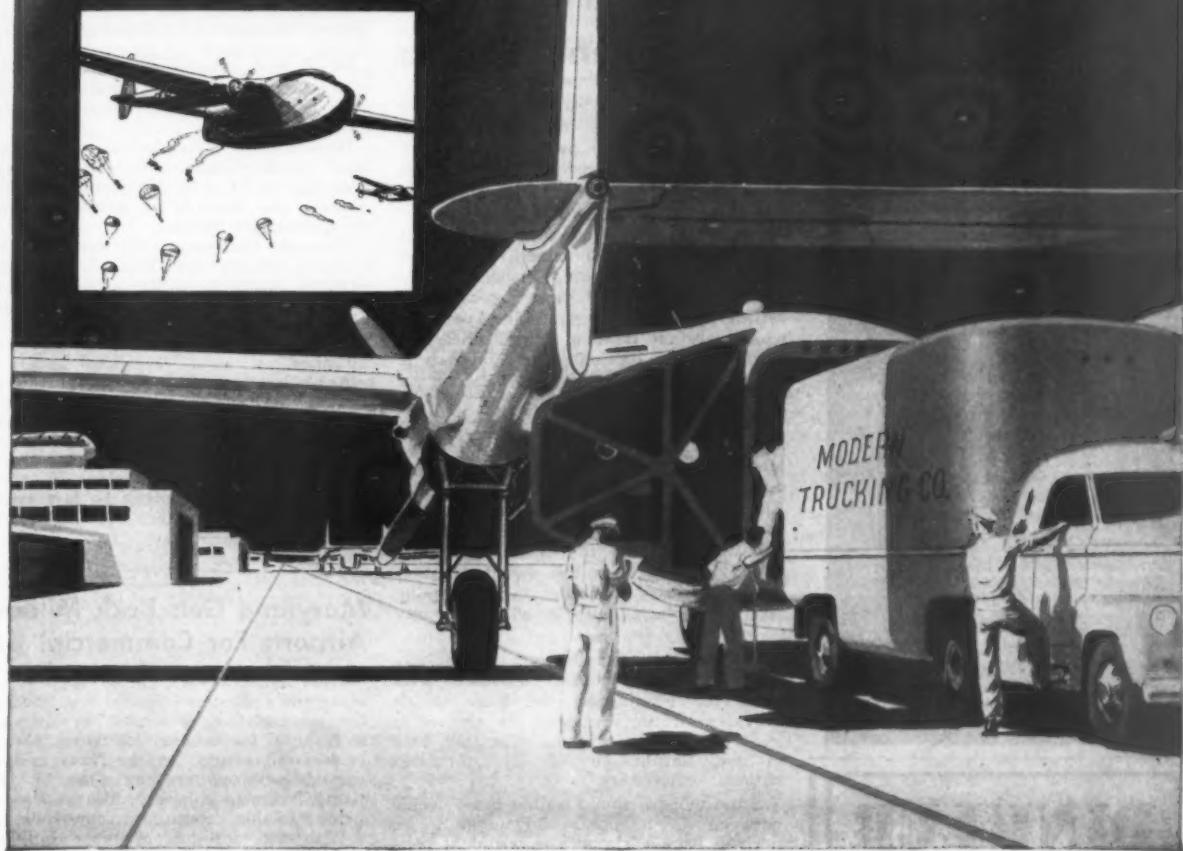
With just three airline schedules each way per day it is obvious that restaurant patrons are attracted to the airport simply because it's a good place to eat. During August 8,125 meals exclusive of luncheonette and soda fountain were served at a gross of \$10,502. Norfleet expects business to do much better as help conditions improve.

He has a few suggestions for other cities. He believes that ample quarters should be provided for a Sky Club so that many memberships can be sold, and that the memberships will pay for that part of the building in which the club is located. A bar, he says, will alone pay running expenses. But the club should be high so that patrons can see the planes. The food must be good.

Leases should not be made unless the concessionaire has adequate contracts on quality of food and service. A long-term lease should be avoided, he thinks, and a 10% gross percentage going to the airport or city is too high—"it doesn't give the restaurant operator much chance to make money without cutting corners." A sightseeing deck is a great drawing card and the concessions should be in front of the terminal building instead of the parking area. Winston-Salem charges a dime for the sightseeing deck.

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A Ship of War—With a Peacetime Destiny

You won't have to beat this weapon of war into a peacetime plowshare. V-J Day will see the Fairchild-designed "Packet" ready to plow the airlanes of commerce.

Built specifically for military cargo—tons of guns, men and equipment for battle—the "Packet's" huge hold will receive the bulky goods of peacetime commerce with ease, speed them hundreds or thousands of miles to their destinations.

Designated by the Army as the C-82, the "Packet" has been nicknamed the "flying boxcar." Its cargo compartment (2,870 cubic feet of unobstructed and continuous space) carries 93% of the capacity of a railroad boxcar.

Facility in loading is a triumph of Fairchild design. Split doors at the rear of the fuselage open to the full width of the cargo space. Cargoes roll smoothly into the "Packet" from a truck, for the "Packet's" horizontal floor is at standard truck floor height. Smaller pieces can be loaded through a forward loading door.

The value of the "Packet," to shippers of all types of "flyable" cargo, will be as broad as the future of air cargo itself. Time and experience will attest to its economy and multiplicity of uses. Thus, the "Packet," now at war, emphasizes the Fairchild tradition of advanced aviation, "the touch of tomorrow in the planes of today."

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Crew Chief—Flight Engineer—
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Parks trained men have a long, proven record of winning and holding positions such as these in Aviation Operations Engineering, Aviation Maintenance Engineering, and Aeronautical Engineering.

Write or wire Oliver L. Parks, President, for full information about Parks Air College and Parks graduates.

PARKS AIR COLLEGE, INC.
East St. Louis, Illinois

Conversion of Military Base Poses Problem At Reading, Pennsylvania

A conflict of interest over the future use of the Reading Municipal Airport, now largely used for military operations, is typical of the decisions that must be reached by scores of cities and communities throughout the United States.

Some 600 civilian employees of the Air Technical Service Command which has been using the Reading airport largely as a storage facility have succeeded in getting some 3,000 names on petitions which asks the Reading City Council and Pennsylvania's delegation in Congress to have the Reading Airport retained in peacetime as a military base.

Opposing this position is the Reading Municipal Airport Commission, led by Melvin H. Nuss, secretary of the Commission and manager of the airport. The Airport Commission believes that continuance of Army control beyond the termination date in the lease agreement would tend to stifle the development of commercial air transportation for Reading and for Berks County in which the city is located.

The Airport Commission accordingly has asked the city council to proceed with plans for terminating the lease which provides for the return of the airport to local control "six months after the date of the termination of the unlimited national emergency."

Nuss believes that Reading must decide between the temporary advantage to be derived from a sizeable government payroll which is spent largely in Berks county and the long range benefits which will come from putting Reading on the air transport map of the country. He does not believe that commercial operations can be developed to any appreciable extent if the Army controls the airport.

One of the arguments which the citizens group advanced was partially dissipated Sept. 12 when the Civil Aeronautics Board made Reading a point on Colonial Airlines new route between Washington, Ottawa and Montreal. It had been contended that only one major airline—TWA—was operating into Reading and that recently it had cut down its daily flights from six to two. While Nuss reports that 100 persons per month are being denied air transportation because of TWA's curtailed service, the citizens group had held that present commercial use of the Reading airport was relatively insignificant compared with the community benefits which would be derived from continued operation by the Army. TWA was compelled to reduce flights into Reading when the Philadelphia airport was reopened and troop redeployment had taxed the country's transportation system.

"We contend that commercial airline service by several of the principal carriers, supported by feeder lines, will benefit every one of the 85,000 or 90,000 gainfully employed persons of our community," Nuss stated. "Retention of the Army, in our opinion, will only benefit a very limited number in comparison."

Acker Resigns as Manager of Birmingham Airport

Steadham Acker, one of the best known airport managers in the country, has resigned as manager of the municipal airport at Birmingham, Ala., and will devote his time to national aviation projects such as air shows and consulting work for municipalities.

He has been succeeded as acting manager at Birmingham by Mrs. Frances Peacock, for 14 years his secretary at the airport and known to aviation people throughout the South.

Through the annual Birmingham Air Carnival before the war, Acker drew national attention to the city. The free three-day air show attracted huge crowds and brought many prominent people to Birmingham where they were royally entertained.

Acker has served his connection as consultant to Oklahoma City but remains as consultant for the aviation clinic there. He is also consultant to the City of Denver. He may stage another air carnival at Birmingham, but his plans have not been perfected. Meantime he is planning to promote a number of air shows throughout the country.

Maryland Gets Back Military Airports For Commercial Use

The Salisbury-Wicomico Airport on Maryland's Eastern Shore will become the second military airport in Maryland to be used for commercial flying when it is declared surplus by the Navy and returned to its owners next Dec. 15. The Army interceptor base at Easton was returned to that community some time ago.

With the addition of more buildings and hangars, the Salisbury field, possessing 4,500-foot runways equipped with border lights, is expected to qualify as a class three field.

Maryland should have, within a year, four top-notch fields suitable for commercial operations, Baltimore, Easton, Salisbury, and Cumberland. Ocean City and Cambridge are preparing to establish their own municipal airports. Aberdeen, Edgewood Arsenal, and Fort Meade will probably retain their airports as Army fields.

Detroit Announces Plans For Northwest Airport Facility

Plans for a proposed \$20,000,000 Northwest Airport, covering a three-square-mile area and with runways up to 8,000 feet in length, have been announced by the Detroit Board of Commerce's aviation committee.

Airline engineers, Mayor Jeffries and the City Council have approved the airport's site in the vicinity of Eight Mile road and Wyoming avenue where a new Detroit shopping center is expected to develop. Containing, in addition to shops, a theater, recreation facilities and restaurants, the airport will be a "city within a city," according to the committee's plans.

Administration and terminal structures will be located in the field's center, access to which would be by underground vehicular and pedestrian tunnels.

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Army to Need Airline Fleet of Big Transports

Commercial Lines Would Be Backbone of Defense

By ERIC BRAMLEY

CALCUTTA—The domestic and international airlines of the United States must possess a sufficient number of large transport aircraft to carry a small, highly trained army to any point in the world to ensure security in the postwar period.

This idea of making the airlines the backbone of our postwar defense has been expressed to this correspondent by responsible military aviation officials—officers who have seen how air transportation saved the day in this part of the world.

(These opinions were expressed to AMERICAN AVIATION before anything was known of Lt. Gen. Harold L. George's statement that U. S. airlines should have 4,500 airplanes after the war. It marked the first time that military officials here have expressed their views on postwar aviation.)

Air operations in this theater, operations which saw China supplied by air (overshadowing help forthcoming from the much-publicized Stilwell Road), have given the lie to theories expounded in Army schools as late as a year ago, when generals and other high-ranking officers were told that it was virtually impossible to move armies by air and keep them supplied.

Moved Complete Armies

The India-China Division of the Air Transport Command it was revealed to this correspondent, has moved four complete armies by air, in months when it was also putting better than 50,000 tons a month over the Hump into China. As part of this movement, 3,800 mules (a C-47 carries four) were carried by air.

Looking at the war as a whole, however, officers here do not believe that the U. S. Army, the most modern army with the most modern weapons, made sufficient use of the most modern method of transportation—air transportation. In the future they hope things will be different.

There will be a limit to what the U. S. can spend for postwar defense measures, they say, adding that huge expenditures will be unnecessary anyway.

"Give our airlines 3,000 airplanes in tinued, when it was believed that 10,000

the C-54 class, or larger, and they will be able to move a compact, highly trained U. S. force, or international force, to danger spots anywhere in the world—and keep them supplied," said one officer. "A huge standing army will be unnecessary.

"It will probably be necessary to subsidize the airlines, but this should be done willingly. The expense would be infinitesimal compared to the cost of huge navies, fleets of bombers and fighters. Of course, bombers and fighters will be necessary, but not in as large numbers as would otherwise be the case. And you can forget the Liberty ships and the troop transports."

Thus, by leaving the U. S. airlines to private enterprise, but giving them any necessary subsidies, these military men believe that much can be done toward preserving the future peace of the world—and at much less cost than would otherwise be possible. "Three thousand C-54s and you've got the world by the tail," one of them said.

Need Inland Plants

Asked for his opinion, Brig. Gen. William H. Tunner, commanding general of ATC's India-China Division, stated emphatically that a strong U. S. airline system, and in turn a strong manufacturing industry with inland plants, will be the best guarantee against future aggression.

"We've proved here what the airplane can do," he said. "Sometimes our job has been pushed into the background by much smaller but more spectacular movements—for instance, flying 50,000 troops a month home or moving a couple of divisions into Japan by air. Here we move whole armies.

"And there's no limit to what the airplane can do. The Hump would never have reached the saturation point—we could have assigned new altitudes and new routes indefinitely. And we were getting ground time cut to a minimum and air traffic control down to a fine art.

"The C-54 is a great airplane. There has been nothing to compare to it. We've found that we can get 360 hours of flying out of it in a month, with just normal maintenance."

There was a time, Gen. Tunner con-

tons a month was the maximum that could be carried over the Hump, and armies in China were told to plan campaigns accordingly.

When Lt. Gen. Albert C. Wedemeyer took over command of the China theater he asked Gen. Tunner how many tons ICD could deliver to China. Gen. Tunner answered the question with a question: "How many tons do you need? There's no limit if we have enough airplanes."

So Gen. Wedemeyer made the necessary arrangements for equipment to deliver 120,000 tons a month to China. At the time of the Japanese surrender operations were at the rate of 83,000 tons a month and would have reached 120,000 shortly.

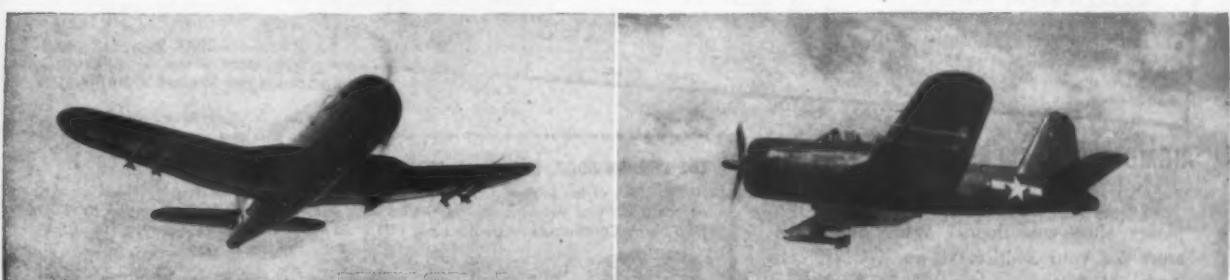
Gen. Tunner was able to reveal for the first time the real purpose behind Big Push Day over the Hump on Aug. 1, the 38th anniversary of the Army Air Forces. The Push was held for the purpose of proving that supplies could be delivered at the rate of 120,000 tons a month. On that day, despite bad weather, they were delivered at the rate of 180,000 tons a month.

Airlines are Reservoir

"We were no longer kidding ourselves. We proved that it could be done," Gen. Tunner said. And the pace could have been maintained, he added, by doubling or tripling the number of Chinese used to load and unload the planes.

Had the war continued, the Stilwell Road would never have replaced air transportation, and it is doubtful if it would ever have approached it in importance. Its most important contribution was in the delivery of heavy vehicles. But to deliver 100,000 net tons a month to China would have required two 2½-ton trucks each delivering a ton of supplies every minute, 24 hours a day, in China. The other ton and a half in the truck would have been used for gasoline and rations for the return trip. A round trip over the road would take a month; therefore, each truck would deliver one ton a month. A C-46 Commando delivers 140 tons a month—replacing 140 trucks.

It has been proved in this part of the world what the airplane can do. And the military men believe that this can be carried over into peacetime—that the airlines of the U. S., a reservoir of transport air power, are a guarantee that the postwar world will be a peaceful world.



Ryan Fireball—The Navy's much discussed FR-1 composite fighter was publicly unveiled October 24 at dual ceremonies in Washington, D. C. and San Diego. The Fireball is the first American aircraft to incorporate a composite power plant installation, with a conventional Wright air-cooled engine driving a propeller in the nose to provide short take-off runs for carrier duty, and a General Electric turbo-jet engine in the tail for high speed performance in flight. The Wright engine in the nose is a new model of the R-1820 designated as the C9H which was developed especially for the FR-1 and has a take-off rating of 1420 hp as against 1200 hp for previous R-1820 models. This new engine will be used in the Martin 228 transport, and possibly in the Martin-Westinghouse Stratovision aircraft.

MILITARY

New F2G Navy Fighter Built by Goodyear

A NEW Navy fighter with a rate of climb said to be half again as fast as the latest developed jet aircraft was revealed last fortnight by Goodyear Aircraft Corp. with Navy permission.

Designated as the F2G, the new aircraft is a development of the FG Corsair powered with a 28-cylinder Pratt & Whitney R-4360 Wasp Major engine, with a military and take-off rating of 3,000 hp, and a war emergency rating with water injection in excess of 3,650 hp, driving a four-bladed Hamilton Standard super hydrodynamic propeller. Wing span of the F2G is 41 ft., same as the Corsair; overall length 33 ft. 9 in., and overall height 16 ft. 1 in. It is equipped with specially designed vertical tail surfaces including an automatic auxiliary rudder for greater stability and control.

Armament includes six wing mounted .50 cal. machine guns, and eight aircraft rockets mounted under the wings. Two 1,000 lb. bombs, auxiliary fuel tanks, or additional rockets can be carried externally on pylons beneath the main beam structure.

The F2G has an initial rate of climb of 7,000 ft./min., and a range of 2,500 mi., substantially greater than that of the Corsair. Maximum speed is 428 mph at 16,500 ft. without water injection, and 450 mph at the same altitude with water injection.



Goodyear F2G Navy Fighter.

ATC Plans Drastic Cut In World Operations

The War Department has announced plans for drastic reduction of the Air Transport Command's operations which call for a cut in its fleet of 3000 transports to 650 by July 1, 1946, and a slash of personnel from 210,000 to 80,000 or less. The ATC's scheduled routes, foreign and domestic, will be dropped from 180,000 miles to 79,000 miles by mid-summer of next year. All local intratheater services will be turned over to AAF units now engaged in transport activities in those theaters.

ATC will continue its service between the U. S. and occupational forces overseas. It will continue an Atlantic operation from New York to Paris and operate limited service through Europe, including a run from Paris through Rome, Athens and Cairo, until U. S. commercial carriers are able to render required service on their certificated routes. ATC also will operate to Berlin and Frankfurt if theater commanders deem this necessary.

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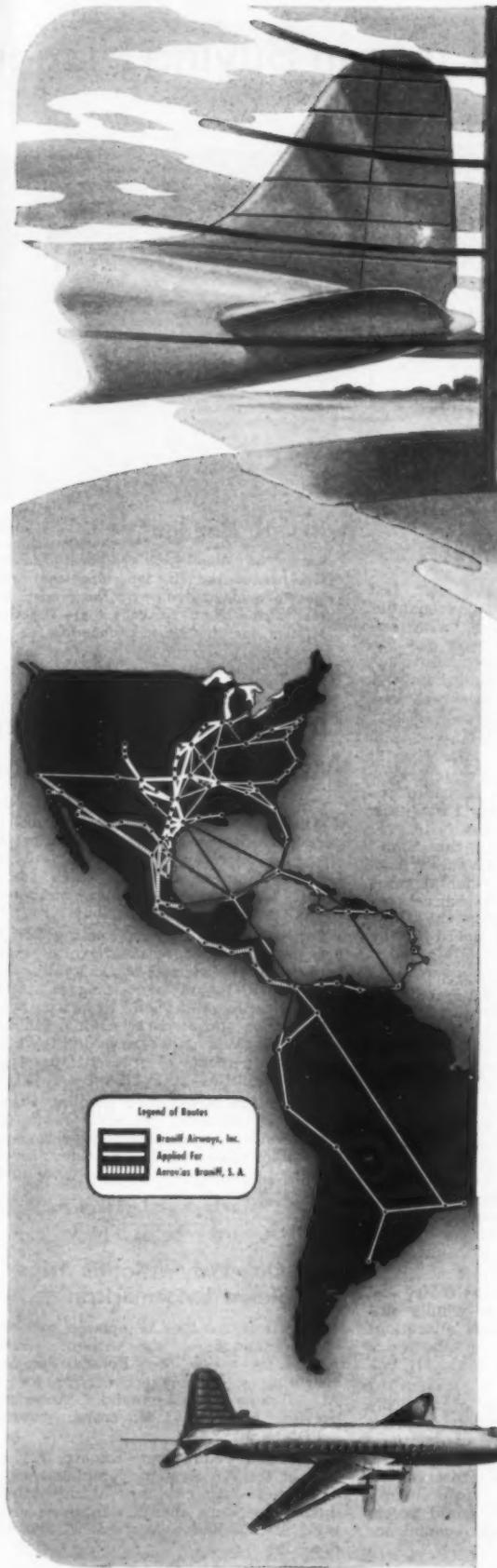
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system between business centers of the Western
Hemisphere. Such a system will contribute
substantially to the good neighborliness of the
Americas, aiding full employment and prosperity
among the nations served.

BRANIFF AIRWAYS

Price Policy on Surplus Aids Lines in Buying Planes

Delivery Price of \$20,000 Setup for C-47s 'As Is'

AIRLINE executives are in a somewhat better position today to make long range plans for their equipment needs as a result of the receipt of additional information on prices and delivery schedules on surplus transport aircraft, particularly with reference to four-engine C-54 models.

It was expected that by Oct. 1 approximately 100 Douglas DC-4 type transports (C-54s) will have been declared surplus, with 120 more of this model becoming available before the end of the year and another 200 by the middle of 1946.

Surplus Property Board sources said that a tentative schedule regarding the number and types of C-54s to be released had been agreed upon by responsible government agencies.

The first 20 C-54Es were allocated to the three U. S. flag line carriers Sept. 6, as was noted in the Sept. 15 issue of *AMERICAN AVIATION*. Another 20 C-54s, the basic model and sometimes described as the war weary group, have been declared surplus but to date no interest has been exhibited in them because of their condition.

By Oct. 1, it was expected that 30 more C-54As and 30 C-54Bs would be declared surplus, with 20 of the B models slated for foreign airlines.

During October, the schedule called for 40 more of the A and 40 of the B models, with 25 each during November and December of a yet undetermined model.

More to be Surplus

Between the end of the year and July 1, 1946, it was expected that another 200 of this type of plane would be declared surplus.

The type price on the C-54E—the so-called plush version of military transport, has been set at \$300,000 less a 50% allowance for conversion costs. These models are being turned over to the airlines, through surplus property allocation procedures, on payment of a rental charge of \$24,000 a year. Actual conversion costs must be submitted to the RFC and if allowed become the subject of a later readjustment when the lease agreements are actually signed.

The \$24,000 figure is reached by taking the \$300,000, subtracting the \$150,000 for conversion cost, deducting a 20% residual value based on a five-year life of the plane and then dividing the resulting \$120,000 by five, representing the five-year life, to obtain the annual rental figure of \$24,000.

Type price on the basic C-54, the war weary models, is \$200,000, with the same 50% allowed for reconversion and 20% for residual value. The type price on the C-54A is \$250,000 with the same price formula in effect. Price schedules on other C-54 models have not yet been determined.

RFC executives said today that the basic, selling price on the Douglas DC-3 type cargo plane, the C-47, was \$20,000 on a take-away as is basis. Some of the newer type C-47's will have a higher sale price, subject to negotiation in individual cases.

10 C-54s Delivered

Ten of the 20 Douglas DC-4 type airplanes (C-54Es) recently allocated to three U. S. International Flag carriers have been delivered to the respective carriers.

TWA has received four, Pan American three and American Export Airlines three. Under the terms of the Surplus Property Board allocation of Sept. 6, Pan American is to receive eight and TWA and American Export six each.

TWA Accepts Cut In Mail Pay, Protests

Transcontinental & Western Air last fortnight informed the Civil Aeronautics Board that it had accepted "with extreme reluctance" the 45 cent per ton mile mail rate set for the Big Four carriers by CAB in mid-August. TWA was the last of the four airlines concerned to agree to the mail pay slash.

Its acceptance was made in a personal letter from TWA President Jack Frye to CAB Chairman L. Welch Pogue. Frye made it plain that he felt the rate cut impinged more heavily upon TWA than upon the other three majors. "A reduction in our mail rate at this time," he told Pogue, "further penalizes TWA as compared with its transcontinental competitors. This penalty is the direct result of the inequality of equipment which has been allocated by the Board to the carriers."

The Board, said Frye, has constantly maintained the fleets of TWA's competitors at numbers varying from 20 to 60 per cent higher than TWA's fleet. He asserted that during 1944, TWA had an average of 35 planes in service, compared with 57 for American Airlines and 45 for United Air Lines.

A carrier's profit during the war years, Frye maintained, has been a function of the number of aircraft in its fleet. TWA he said, had been able to earn approximately \$151,000 on each plane it had in service. Had TWA possessed a 57-plane fleet, its 1944 profit could have been \$3,320,000; with 43 planes it could have earned \$1,200,000.

During the war years, therefore, the airlines' earning power was wholly dependent upon surplus aircraft allocations made by CAB; recourse to the open market for new planes was obviously impossible.

He declared that because of the "inequality" of CAB's allocations, TWA's competitors found themselves today in a more advantageous financial position, some having large capital reserves to meet post-war expansion requirements. These carriers, Frye stated, could accept mail pay cuts with greater confidence than could TWA.



Speeds Handling—To facilitate handling passengers at Washington National Airport, PCA has marked its departure lanes with signs to guide customers to the proper reservationists. Here passengers are checking in for the Norfolk departure.

United Will Spend Ten Millions on Expansion

United Air Lines is getting under way a \$10,000,000 expansion program of airport and other ground facilities to set the stage for operation of new four-engined, Douglas Mainliners, 50 of which are on order for the company, it was announced by W. A. Patterson, president.

Patterson said projects totaling \$250,000 are now in progress. Several major projects to be started soon, totaling \$3,000,000, will include new hangars at Chicago, Seattle and San Francisco; new traffic office and airport terminal facilities at Los Angeles, and a new flight kitchen and enlargement of present passenger service facilities at Portland.

Installation of enlarged gasoline storage and cargo handling facilities, reinforcing ramps and runways areas, and revisions in traffic offices and passenger service facilities are included in jobs now under way.

508 One-Way Atlantic Trips Completed by American

American Airlines completed 508 one-way crossings of the Atlantic during August for a new high by that company, operating as a contract carrier for the Air Transport Command. American's previous record was 465 crossings, established in June.

Meantime American Export Airlines, part of the AA System, completed a total of 150 one-way crossings of the Atlantic during the same month. In these crossings, AMEX had a total of 522,066 miles flown.



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You will fly fast in the Voyager 125. It has a top speed of 128 m.p.h., and a cruising speed of 116 m.p.h.

Even on long, cross-country trips you'll fly comfortably. There's room for four in the soundproofed, ventilated cabin. The scientifically shaped, richly upholstered seats really let you relax. And a cabin heater keeps you snug and warm, no matter how cold it is outside.

Traditional Stinson safety is built into the Voyager 125. High in inherent stability, it nevertheless has wing slots to make it spin-resistant. Its flaps make the shortest runways seem comfortably long.

The seven-foot landing gear tread, steerable tail

wheel, and push-button parking brakes give this Stinson extraordinary ground safety.

You'll travel in the Voyager 125 at a cost of less than 6 cents per mile . . . approximately 1½ cents per seat per mile. That includes all operating costs.

You'll have the assurance, too, that this plane is backed by Stinson's 20 years of experience in building quality personal planes, and by the vast research and manufacturing facilities of Consolidated Vultee Aircraft Corporation.

Let us send you full details of the Voyager 125. Write Stinson Division, Consolidated Vultee Aircraft Corporation, Wayne, Michigan.

Stinson

... EASY TO BUY, EASY TO FLY

**Stinson Division, Consolidated Vultee Aircraft Corporation,
Wayne, Michigan.**

More Than 3000 Vets. Returning to Airlines

U. S. Airlines are not only restoring jobs to employees returning from war service but they are taking on many other veterans, Air Transport Association reports.

Although the system set up by the airlines for hiring of veterans is just beginning to have full effect, more than 3,000 veterans were expected to be on airline payrolls by the end of September. Of this number more than one quarter will be personnel who were employed by the airlines before they entered military service.

The 3,000 figure includes only those veterans who are either on the payroll at this time or have been given a definite date on which to report for work. At present, about 280 veterans are being hired or rehired each week by the airlines.

Pennsylvania-Central Airlines, for example, has accepted as co-pilots 36 former AAF pilots who have flown more than 3500 overseas missions and amassed nearly 60,000 hours of flight time.

The fliers are part of a group released under a program by which a limited number of air corps personnel, having completed overseas combat duty, are being made available to the nation's commercial airlines. The men were signed on for co-pilot training with PCA after being selected from hundreds of candidates by a panel of the airline's personnel, medical and flight operations departments.

CAA Lists 5932 Airmen Certificates During August

The following table is a compilation of the number of airmen certificates by classes issued by the Civil Aeronautics Administration and outstanding at the end of August, 1945. The first column lists the number of certificates by types issued by CAA during the month of August.

	Recorded during August	Active Certificates Outstanding
Pilot certificates	5,932	153,676
Student Pilot certificates	8,039	172,790
Glider pilot certificates	2	2,350
Glider pilot student certificates	6	923
Mechanic certificates	92	26,781
Ground instructor certificates	65	15,027
Air Traffic Control Tower Operators Certificates	62	7,393
Aircraft dispatcher certificates	4	888
Parachute technician certificates	15	1,018

Five Manufacturers Bid On American Transport

American Airlines revealed the names of five manufacturers who have submitted bids and specifications on the medium transport which it proposes to purchase in large numbers. William Littlewood, v.p.-engineering, said the manufacturers and the models submitted were:

Boeing Aircraft Co.—Model 431-16, seating capacity 30, cruising speed 265 mph.; Consolidated Vultee Aircraft Corp.—Model 110, seating capacity 32, cruising speed 265 mph.; Curtiss-Wright Corp.—CW-28, seating capacity 32, cruising speed 288 mph.; Douglas Aircraft Co.—DC-8 Sky Bus, seating capacity 34-48; cruising speed 260 mph.; Glenn L. Martin Co.—

Model 202, seating capacity 30-42, cruising speed 270 mph.

In an unprecedented action, each of the nearly 10,000 American employes has been issued a comprehensive brochure containing descriptions and drawings of the five models and has been asked to express his preference.

Panagra Celebrates 17th Year Of Service in South America

Pan American-Grace Airways on Sept. 13 celebrated its 17th year of uninterrupted scheduled commercial operations along the west coast of South America to Buenos Aires, Argentina. It was just 17 years ago, September 13, 1928, that a Fairchild monoplane carrying four persons made the initial flight from Talara to Lima, Peru, a distance of 600 miles. Since then the airline has been expanding its facilities until today with a fleet of DC-3's it operates a route of 8,800 miles extending over eight Latin American countries—Panama, Colombia, Ecuador, Peru, Bolivia, Brazil, Chile and Argentina.

Panagra's operations during the first half of 1945, recording an increase over the corresponding period in 1944, the airline's best year, showed 36,663,656 passenger miles over a distance of 2,555,995 miles. The organization carried 43,511 passengers and 1,668,801 pounds of express and mail. This represented an operational gain of 12½% in passenger miles and 26½% in express and mail over the same six months period of last year.

TWA International Division To Have New York Offices

Three floors totaling more than 44,000 sq. ft. have been leased in a building at 521 Fifth Avenue, N. Y. C., by Transcontinental & Western Air for activities of its international division. The space has been occupied during the war by the Army Quartermaster Corps and the Navy Bureau of Yards and Docks.

TWA's eastern region and New York district offices, as well as ticket counter and reservations offices, remains at 80 East 42nd Street.

Hawaiian to Reduce Fares

Hawaiian Airlines plans to reduce passenger fares on all its routes effective Oct. 15, according to M. W. Mitchell, general traffic manager. The proposed one-way fares will be 16 2/3% lower than those now in effect.



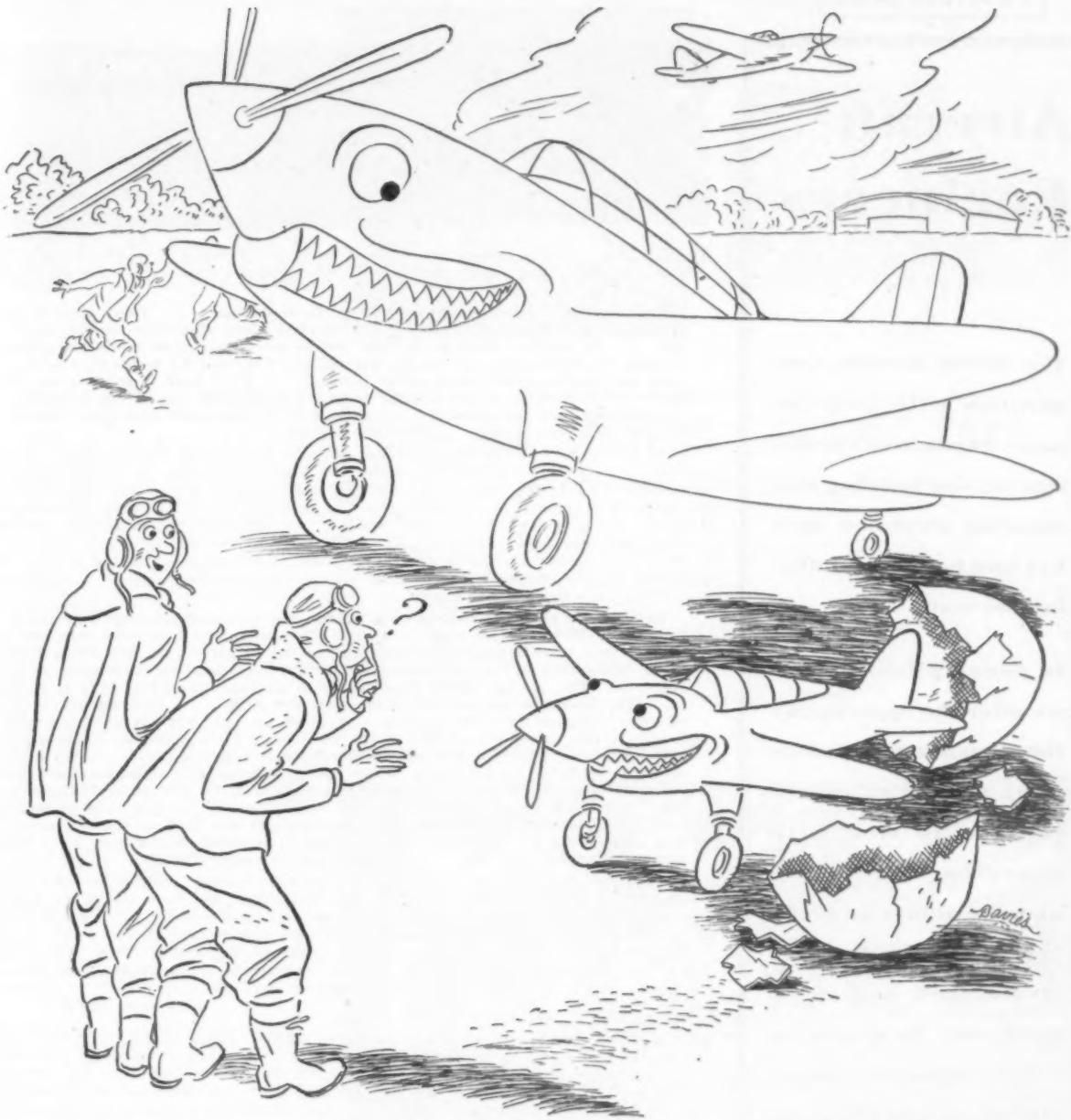
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“Even if I reported this, the CO wouldn’t believe it! ”

So many new aviation ideas have been hatched during wartime that it is easy for the general public to slip into the belief that major aviation progress is possible only during wars.

Nothing could be further from the truth. Many developments hailed as wartime discoveries were in practical use long before the beginning of hostilities. The needs of war served to speed their *production*. Furthermore, the emphasis on military aviation has tended to sidetrack the development of commercial and private aircraft. This lag must be made up by strengthening of research programs, rather than their abandonment.

For example, engines must be developed to realize the full possibilities of future aviation fuels from both performance and *economy* standpoints. Aviation gasoline has already burst

through its “ceiling” of 100 octane. New refining methods and the use of Ethyl fluid have provided new fuels so high in antiknock quality that some means other than the “octane” scale will be required to express their ratings.

Post-war research workers, unhampered by the specialized requirements of military planes and fuels, may well make the years *after* the war the truly great era of aviation progress.

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Manufacturers of Ethyl fluid, used by oil companies to improve the antiknock quality of aviation and motor gasolines.



Aircraft Engineers



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**BEECH AIRCRAFT
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Wichita 1, Kansas

Airline Commando

WELL, we made it back from India, Burma and China . . . The story of our 58-hour flight from India appears elsewhere in this issue . . . We still find it hard to believe . . .

This column is going to continue to try to amuse you . . . Don't read it for any world-shaking thoughts—we'll let you find those elsewhere in the magazine . . . In addition to what we hope will be interesting little yarns, we intend to stick the needle into our friends the airlines whenever we think they need it (and also to give credit where credit is due) . . . We'll have to sharpen up our power of observation a bit, because during a 34,000-mile trip flying becomes a bit boresome and you generally curl up and try to sleep and who cares whether the service is very good . . . We'll remedy that . . .

We've flown the Atlantic twice and still get a thrill out of it, but truthfully it's very routine . . . There we sat, 8,000 ft. above the Atlantic, between the Azores and Newfoundland . . . Yours truly was occupying the co-pilot's seat . . . We had passed the point of no return . . . Dawn was just breaking . . . Truly an awe-inspiring situation, but guess what we were doing . . . Through the earphones we were listening to some very nice swing music from a station on the west coast of the U. S. . . And—and this is the payoff—the orchestra was playing a tune that definitely was not proper music to sooth a pilot out over the Atlantic . . . The tune was "Straighten Up and Fly Right" . . .

Well, we see that the airlines have made some very commendable fare reductions . . . Now what do you say we put the bite on the boys who soak you a buck fifteen to ride from downtown out to the airport . . . We did a little rapid calculation and if our figures are correct they show an interesting situation . . . The air fare from Washington to Chicago (including tax) is \$31.34 . . . The limousine ride on both ends costs you \$1.90 . . . This, friends, is 6% of what you paid for your air trip . . . And, on New York-Washington your limousine ride sets you back 16% of the one-way fare . . . And on Washington-Pittsburgh it's 18% . . . And on Wichita-Tulsa it's almost 23% . . . We make no claim to being an economist so we may not figure this right, but here are some interesting figures . . . According to schedules, it's nine miles from downtown New York to the airport, and the limousine fare is \$1.00 (not including tax) . . . Suppose a limousine takes 10 people to the field, and sticks around and takes 10 back . . . That's \$20 for 18 miles, or about \$1.11 a mile . . . The airlines charge 4½¢ a mile . . . Anybody got any suggestions?

We are about to dig down deep into our pocket and buy each airline one aerosol bomb or one bottle of DDT . . . On a trip to Chicago and back which we took the other day, the airplanes had about two flies per square inch . . . We've harped before about how these non-revellers won't let you get any sleep, won't let your food alone, etc. . . . A little spray would solve all this and it really doesn't smell bad . . . The same thing goes for airport restaurants . . . Jack Casey could do something about this at Chicago Airport but he isn't the only one . . . There are plenty of others . . .

CALCUTTA—Millions of words have been written about flying over the famous Hump from India to China and there was a time when people who had done it were regarded with awe . . . But over here it's regarded in somewhat the same light as flying from New York to Washington, and there are guys out of headquarters who do it a couple of times a week . . . And the pilots of Assam, instead of flying to China and then resting a week after their "rigorous" experience, turn around and fly right back to Assam . . . The Hump is still the world's toughest air route and the pilots deserve all the praise they get, but we just want to make the point that for all the rough, exciting trips that are made, there are many more that are like stateside flying . . .

Here's what happens when you cross the Hump as a passenger from Calcutta . . . You report to the passenger terminal, your ticket is checked and your baggage weighed—just like in the U. S. . . . Then you are briefed—told what to do if you have to bail out, how to open the chute, etc. . . . Each chute has a jungle kit containing food, medicine, maps, a booklet on survival in the jungle, and other necessities . . . (It's advisable to wear GI shoes when crossing the Hump—mosquito boots or law-cut shoes are not ideal for jungle treks) . . . Next, your parachute is fitted—you're not required to wear it in the plane, but you sit on it, just in case . . . You are also furnished an oxygen mask . . . You're now ready to go, so you climb into your C-54G and in a few hours you're in China . . .

We are now an old-time veteran of all of two Hump crossings, and when someone asks us how we managed to escape with our life, we're going to be ashamed to tell them, or else we're going to have a very fertile imagination . . . It was just about as perilous as riding across a millpond in a rowboat—and just about as rough . . .

There are still plenty of airplanes strewn over the hills from China to India and plenty of pilots still walk out . . . But as far as carrying passengers is concerned, it's routine stuff . . .

ERIC BRAMLEY.



Parker

Meyers

Gentry

Executive

Paul Duncan Meyers, formerly operations officer of the 14th Air Forces 69th Wing, has been appointed assistant to Sigmund Janas, president of Colonial Airlines, Inc.

W. L. Walker, with a background of 10 years in airlines, comes to Mid-Continent from TWA as company treasurer.

Lt. Col. Charles R. Speers, Jr., has been elected regional vice president of American Airlines in charge of the airlines traffic organization in the Eastern Region. He will headquartered in New York.

Traffic

Jessie L. Bathgate, for four years a Western Air Lines stewardess, has been appointed supervisor of stewardess training.

Ted Gilmore, new Superintendent of Air Mail and Express for Mid-Continent Airlines, has been promoted from his former position of City Traffic Manager at Tulsa, which position was filled by B. A. Pugh, Jr.; while Harry R. Studer, former American Red Cross field director attached to the 8th Air Force, becomes city traffic manager for Kansas City.

Edward I. Bucklin has been appointed dtn for Continental Air Lines in the Wichita territory succeeding Frank Skinner who has been transferred to Albuquerque, while Gerald S. Kitchen has been named to the newly-created post of cargo traffic representative of Continental Air Lines. Kitchen will be charged with development and expansion of Continental's cargo and air express activities. He was formerly research analyst for the airline.

Laigh C. Parker, one of the old-timers in commercial aviation who has been in the AAF, returns to his former position as traffic manager of Delta Air Lines.

Bernard Kovnat has been named director of displays for United Air Lines, with headquarters in Chicago.

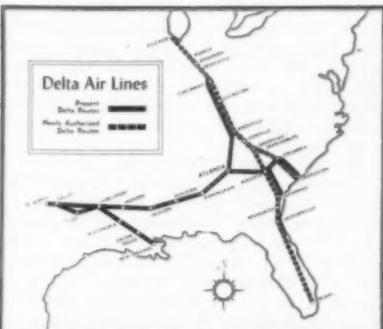
James J. Fauteux has been named regional traffic manager for Northwest Airlines at New York. He has been with the company since 1939.

Maintenance

Roy K. Brown, formerly with Wright Aeronautical Corp., has been appointed Superintendent of Maintenance at Northeast Airlines.

Miscellaneous

Col. Thomas C. Gentry, Surgeon 14th Air Force of the United States Army Medical Corps, has been appointed Medical Director of American Airlines, Inc.



Recent decision by the CAB gave Delta Airlines a new route from Chicago to Miami, as shown on this map.

Airline Personnel



Bucklin

Brown



Kovnat

Speers

Fauteux

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CAB Awards Colonial Washington-Canada Route

Decision Adds 577 Miles To Carrier's System

By DANIEL S. WENTZ, II

COLONIAL Airlines became firmly established as this nation's chief air link with Canada as the Civil Aeronautics Board, in its decision on the Washington-Canada Case last fortnight added a Washington-Ottawa-Montreal route to Colonial's existing New York-Montreal system. The same decision, approved by President Truman, also gave Colonial permission to serve Ottawa on its New York-Montreal route through an extension from Burlington, Vt.

Domestic route amendments included in the decision added Elmira-Corning and Rochester, N. Y., to PCA's Route 34; and authorized American Airlines to serve Elmira-Corning and Binghamton, N. Y., on Route 7. The latter amendment carried the restriction that American could not serve Binghamton of flights touching Wilkes-Barre, Scranton or Syracuse, designed to prevent local service between Binghamton, Syracuse and Scranton in competition with Colonial's new route.

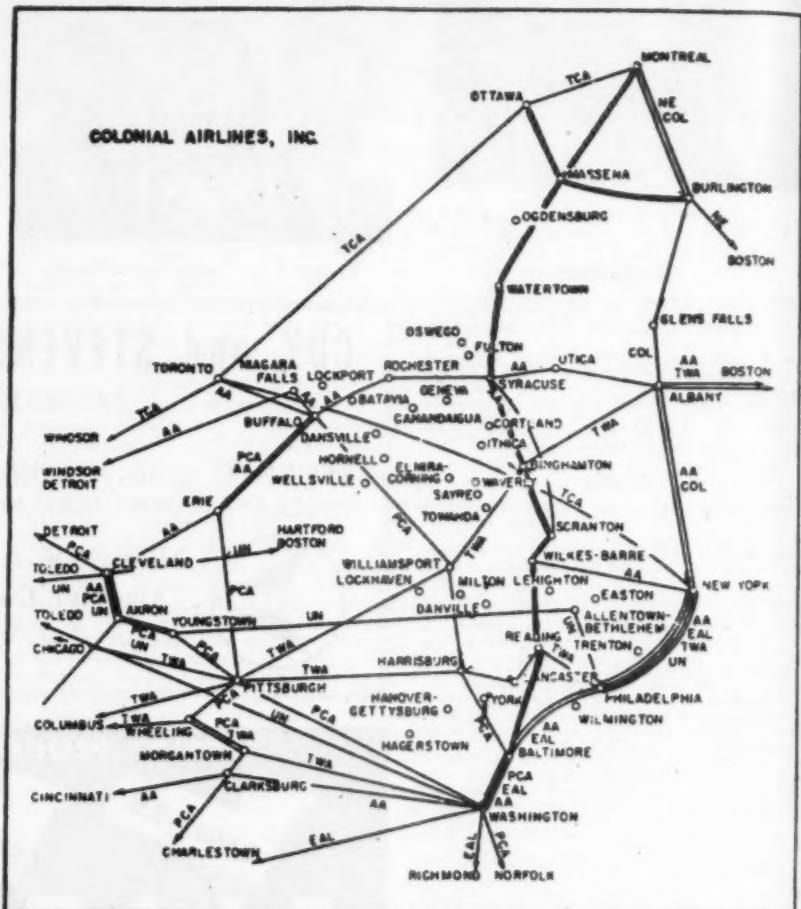
The Washington-Canada route awarded Colonial adds 577 miles to that carrier's system; it includes Baltimore, Reading, Scranton-Wilkes-Barre, Binghamton, Syracuse, Watertown, and Massena, N. Y. as intermediate points. Massena will also be an intermediate point on the Burlington-Ottawa extension of Colonial's Route 72.

Intangible Factors

In finding a direct Washington-Ottawa-Montreal service required by the public convenience and necessity, the Board reversed the findings of its examiners William J. Madden and H. Heinrich Spang, who had concluded that the traffic potentialities did not warrant a direct service. The Board stated that the desirability of providing a direct air service linking the capitals of the two greatest North American nations was an intangible factor which weighed heavily in favor of establishing the route. The same route, said the Board, will also give much-needed north-south services to a number of cities in the eastern U. S. lying between Washington and the Canadian border, pointing out that this area is unusually lacking in north-south transportation of any type.

Colonial was chosen as the carrier to operate the route rather than American or Eastern, the other applicants, because of the fact that a direct Washington-Canada service will divert considerable traffic from Colonial's present New York-Montreal operation. The Board recalled that Colonial already requires one of the highest domestic mail rates, and suggested that diversion of a substantial portion of its business to another carrier would likely demand an even higher rate. On the other hand, they believe, the operation of the new route by Colonial will give an "opportunity to this company to spread part of its existing costs over the new route operation and thereby reduce its present per-mile costs."

The two new U. S.-Canada routes awarded Colonial were actually authorized by four separate certificates of convenience.



Heavy lines on map shows Colonial's new route.

ence and necessity, breaking the domestic and foreign portions of the routes at Massena, N. Y. This division was made to eliminate the need for Presidential approval should Colonial seek an amendment to the domestic segment of the route. Had the route been authorized by a single certificate this approval would be required, for under the terms of the Civil Aeronautics Act as it now stands, the President must pass on all foreign route changes.

The Washington-Ottawa-Montreal route is covered in two certificates, with the domestic section from Washington to the intermediate point Massena designated as Route 71. The continuation, designated as Route 71-F extends from Massena to Ottawa and Montreal, which are listed as separate terminals in order to prevent local service within Canada. In addition, the certificate for Route 71-F permits Colonial, after complying with the proper economic regulations, to operate non-stop services between Ottawa and Montreal and any point listed in its certificate for Route 71 making a Washington-Ottawa or Washington-Montreal non-stop possible.

Similiarly the certificates for Colonial's New York-Canada route break at Massena. The old Post Office designation of this route as FAM-1 has been dropped.

The domestic leg is now called Route 72, and the foreign portion Route 72-F. The certificate for Route 72-F authorizes service between Burlington, Vt., as an intermediate point and Montreal as a terminal; and between Massena, N. Y., as an intermediate point and Ottawa as a terminal. Non-stop permission between points on both routes is provided.

both routes is provided.

Sigmund Janas, Colonial's president, has announced that his company plans to open service on the New York-Ottawa segment by Nov. 1. Inauguration of the Washington-Canada service, said Janas, is planned for Jan. 1, 1946, depending upon the acquisition of the necessary equipment and the installation of ground facilities required to meet CAA route regulations.

On the domestic side, the addition of Rochester as a stop on PCA's route 34, the Board said, will provide a needed direct service between Rochester and Washington. To give Binghamton direct access to New York, as well as additional service to Rochester and Buffalo, the Board included it as an intermediate point on American's Route 7.

The New York towns of Elmira and Corning, which CAB found to need air service, were given that service in generous measure. By adding Elmira-Corning

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as an intermediate point on American's Route 7 and on PCA's Route 34, a four-way service to benefit the approximately 200,000 people in the area surrounding the two cities was established.

American's application for an extension of Route 7 from Wilkes-Barre to Philadelphia via Allentown-Bethlehem, Pa., was deferred until the Board's decision in the Middle Atlantic States Case.

CAB Investigates Service Suspensions

The Civil Aeronautics Board, acting upon its own initiative, has opened a formal investigation of what it calls "the failure of Pennsylvania-Central Airlines Corporation to provide service at Clarksburg, West Virginia, and Morgantown, West Virginia, on route No. 55, and the failure of Transcontinental and Western Air, Inc., to provide service at Morgantown, West Virginia, on route No. 61."

The order opening the investigation was issued last fortnight, and stated that the questions at issue were: (a) whether the suspensions at the West Virginia cities are or are not in the public interest, and (b) whether or not these suspensions violate sections of the Civil Aeronautics Act or of the carrier's certificates.

Clarksburg and Morgantown have been temporarily certificated points on PCA's Route 55 since 1941. On June 26, 1945, PCA applied to the Board for permission to suspend service at both communities because of airport conditions. These requests have never been granted by the Board. PCA, however, stopped serving both places July 2, and has not resumed since. It has recently applied to have Clarksburg and Morgantown permanently certificated as intermediate points on its Route 55. (Dockets 2009 and 2010).

In March, 1944, TWA's certificate for Route 61 was amended to include Morgantown, with the usual national defense restriction against immediate inauguration of service. On Sept. 15, 1944, the Board notified TWA that the national defense no longer required any delay in opening the service, but TWA has not yet begun operations there.

American Airlines is also concerned in the West Virginia picture; it is certificated into Clarksburg on Route 25, but has not served that community since November, 1941, by virtue of a CAB-approved service suspension order.

The character of all three suspensions will be explored in the investigation, launched partially as a result of strong complaints lodged against the carriers by the cities of Morgantown and Clarksburg, and by Senator Harley M. Kilgore (D., W. Va.).

PCA Opens New Office

Pennsylvania-Central Airlines opened its new and enlarged consolidated reservations and traffic offices in the William Penn Hotel, Pittsburgh, Sept. 15. PCA's regional traffic manager here. The reservations offices formerly had been located at the Allegheny Airport and the traffic department in the Clark Building.

Comments Split Sharply on Non-Scheduled Regulations

Fixed Base Operators Oppose Proposals; ATA Approves

THE Civil Aeronautics Board had in its hands at month's end a fairly large and somewhat disappointing body of comment from non-scheduled and fixed base operators on the limited economic regulation of fixed base air carriers proposed by CAB Examiners William J. Madden and Curtis C. Henderson. (AMERICAN AVIATION, Sept. 1.) As a result of these comments, and for further clarification of the problem of the fixed base operator, oral argument will probably be held sometime in November.

The comment split rather sharply into two groups, one whose criticism was plainly the result of close and careful study, and a second which merely filed telegrams labelling the proposed regulation the "death knell of non-scheduled aviation" and asking oral argument. In the latter group were many operators of small fixed base businesses from whom the Board had hoped to receive the most realistic and intelligent guidance; their almost unanimous opposition to the examiners' proposals, without specific point-by-point criticism must come as a disappointment to those interested in non-scheduled aviation and the contribution it can make to air transportation in general.

Fairly summarized, the general feeling of the small operator seems to be that any economic regulation, however limited, is bound to strangle all types of non-scheduled, charter, taxi or fixed base air services.

Parks Files Comments

The most detailed and studied comments were filed by Oliver Parks of Parks Air College, St. Louis; the Air Transport Association; American Airlines; CAA Administrator T. P. Wright; and Public Counsel Philip Schleit and James L. Highsaw, Jr.

Both ATA and American Airlines agreed in principle with the examiners' recommendations. ATA's Stuart Tipton pointed out that for the protection of the fixed base operators, some restriction should probably be placed on competition which might develop among themselves. He cited as a possible instance, a situation in which several fixed base carriers, operating between two points not receiving scheduled service, might engage in cutthroat competitive practices unless suitable safeguards were provided.

T. P. Wright, whose recommendation included a report from the CAA Non-Scheduled Flying Advisory Committee, and Oliver Parks, both opposed regulation at the present time. Parks stated that no regulation should be attempted until abuses demanding regulation began to appear. The non-scheduled industry, he said, is still in an infant stage, and regulation might easily deter its development if applied arbitrarily before the main outlines of that development become clear. Parks agreed with the provisions made by the examiners' recom-

mended regulation to give CAB a source of factual information on fixed base operations.

The Non-Scheduled Flying Advisory Committee likewise opposed regulation until complete data on fixed base operations is available. Previous experience, they declared, is inadequate for regulatory purposes.

Local service operators who viewed the examiners' recommendations as unduly restrictive were probably shocked by the comments of Public Counsel, who found the examiners' proposals too restricted in one sense, but generally too liberal in others. They were too restrictive, said Schleit and Highsaw, in that they took no account of operations which do not originate at a fixed base or which operate over a fixed route with one or more stops. They were too unlimited, Public Counsel declared, in that they would permit a regular scheduled service to be operated between any two or more uncertified points. Public Counsel suggested that a limit of 10 round trips per month between any two points be set as a maximum, and that flights of over 500 miles be limited to five round trips per month. Because the recommended regulation made no distinction between domestic and overseas or foreign fixed base operations, Public Counsel also suggested that a five round trip per month limit be placed on fixed base overseas or foreign operations. They also suggested that each fixed base carrier be required to carry adequate liability insurance.

One of the most encouraging moves in the entire picture was made by the Pennsylvania Aeronautics Commission, which arranged sessions in the State capitol at Harrisburg for discussing the proposed regulation and the proposed Part 42 Civil Air Regulations for non-scheduled operations with the state's fixed base operators. The sessions were attended by representatives of CAB's Safety Bureau, Economic Bureau, and Office of Trial Examiners and of CAA's Safety Regulations Section. Some observers saw in the plan adopted by the Pennsylvania Commission a discussion method that might prove extremely useful if repeated in other states.

Eastern Applies for Route To Montreal and Quebec

Eastern Air Lines last fortnight applied to the Civil Aeronautics Board for route extensions to Montreal and Quebec to establish single company, integrated, trunk line service "between the principal cities of Canada and the principal cities of Latin America through the principal cities of metropolitan United States."

As intermediate points between New York and Montreal and Quebec, Eastern's application lists Poughkeepsie-Kingston, N. Y., Albany-Schenectady-Troy, N. Y., Lake Placid-Saranac Lake, N. Y., Rutland, Vt., Montpelier-Barre, Vt., and Burlington, Vt. It asks either permanent or temporary new route certificate, or that the Canadian link be granted as an extension of either Route 5 or 6.

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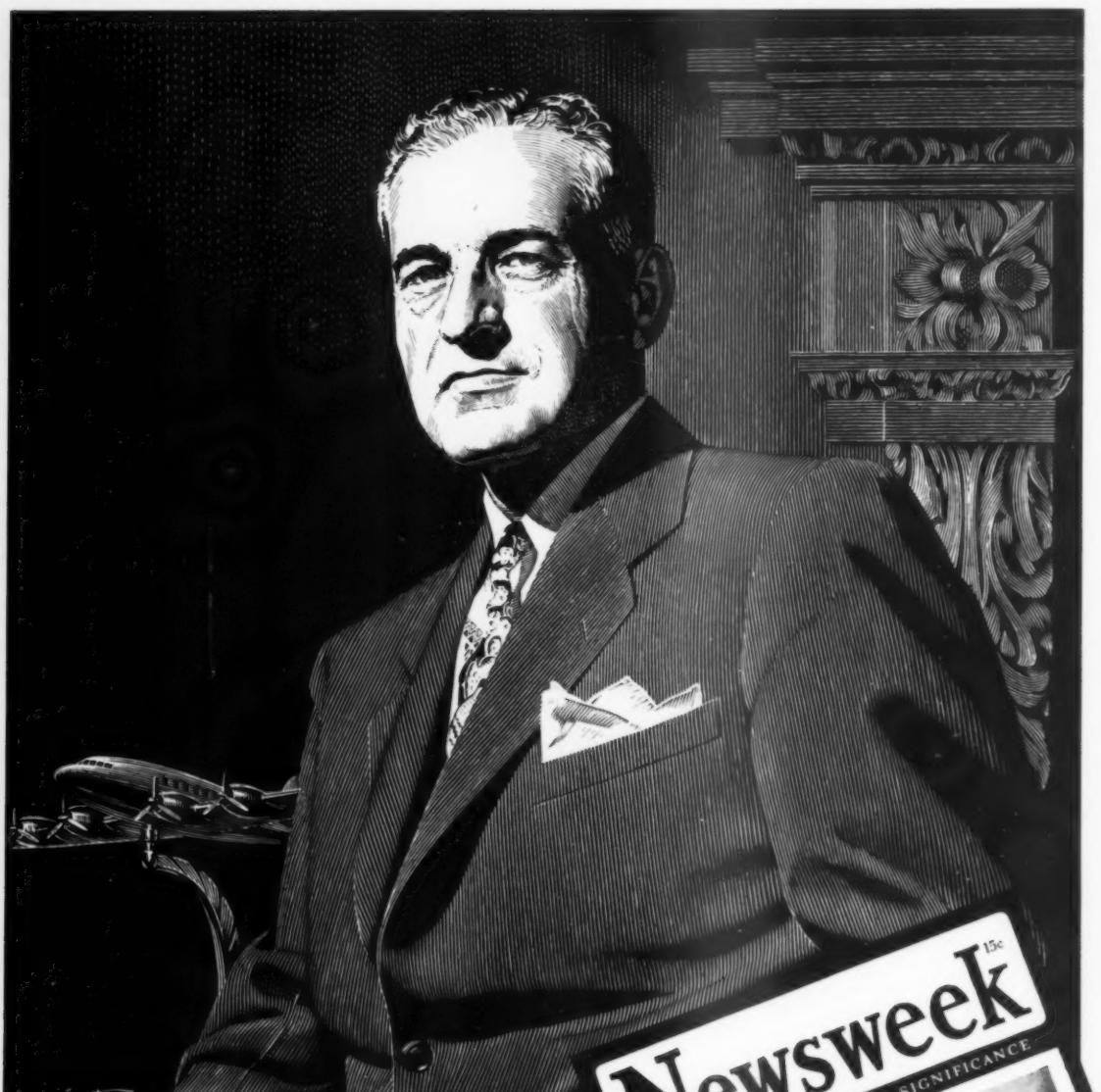
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Pan American Recommended For South Atlantic Route

Service to South Africa Seem As Important Economic Link

THE shape of the last piece to be fitted into the United States' international air route pattern was sketched in roughly by two Civil Aeronautics Board Examiners last fortnight in a report outlining a New York-South Africa route which they recommended should be flown by Pan American Airways.

This new route designed as a strong instrument for developing new commercial ties between the U. S. and the Union of South Africa, would extend from New York to Johannesburg via Lagens (the Azores), Dakar (French West Africa), Monrovia (Liberia), and Leopoldville (Belgian Congo).—Approximately 8,652 miles.

The Union of South Africa, Examiners William J. Madden and James S. Keith state, has "for some time in the past constituted a most attractive market for the foreign commerce of the world", but this lucrative trade has historically gone chiefly to European countries because of the difficulties of reaching South Africa from the U. S. Any route resulting from the Board's decision in the South Atlantic Case, they stated, must provide the most rapid and direct service possible between the two countries in order that the U. S. may exploit the rich commercial opportunities available. Such a route, they found, must subordinate service to intermediate points to the primary objective of rapid direct terminal-to-terminal service. For this reason the examiners rejected proposals routing the South African service via Puerto Rico, Trinidad, South America and Ascension Island, although traffic to and from South American points would admittedly bolster the long, costly South African operation. The Natal-Africa-Paris route sketched by the Civil Aeronautics Board in its tentative route proposals of June 14, 1944, was rejected as being not required by the public interest, although several applicants had asked to operate it. The route finally determined upon by Madden and Keith is very nearly identical with that Pan American applied for. The probable relative in frequency of service the route will support prompted the examiners to suggest that New York be the only U. S. terminal certificated.

In selecting the best carrier to operate the service from the six applicant companies, the report shows that the American South African Line, Inc., a steamship operator was considered Pan American's closest contender, but the examiners recommended disallowing the shipping firm because the service it proposed failed to comply with the highly restrictive interpretation of Section 408 of the Civil Aeronautics Act.

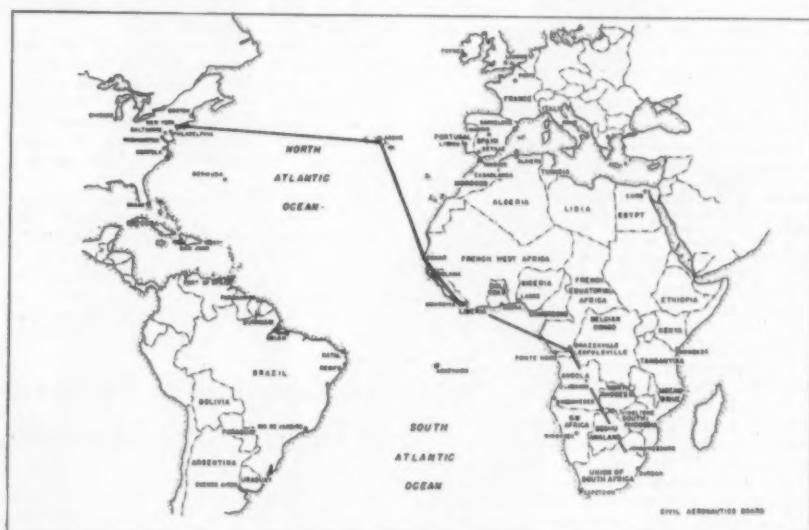
The examiners apparently considered PAA and American South African almost equally qualified "to stimulate and build up the foreign commerce of the United States, particularly with the Union of South Africa," the criterion selected as

the justification for the route. Their choice, however, fell to PAA, because the operation proposed by the steamship line "could not be construed as a service which would be auxiliary and supplementary and therefore incidental to its steamship operations."

This use of the restrictive interpretation of Section 408 to throw out a steamship company application, may, if carried through to the Board's final decision in the case, lead to prolonged litigations in the U. S. courts testing the validity of

weekly round trips of \$3,536,000. "On this basis," they found, "the amount of mail pay required to break even, in addition to that calculated at the rate of \$3 per pound, would be \$728,500 per year. A 10-percent return on a \$4,000,000 investment would increase this amount to \$1,120,500—which they consider quite reasonable "considering the impetus such a route would give to the development of the foreign commerce of the United States."

Pan American's presentation at the hearings in the case proposed two operating plans, one based on the Douglas DC-6, the other on the 108-passenger DC-7. It estimated the cost of inaugurating service with DC-6s at \$3,767,000, using 2.5 aircraft units. With the DC-7, an estimated investment of \$5,347,000 would be required (two aircraft).



South Atlantic Route Recommended for PAA

the Board's interpretation. The situation in which the American South African Line finds itself in the South Atlantic Case, therefore is closely analogous to that of the Matson Navigation Co. in the Hawaiian Case. In both instances, a shipping company which has proved itself fit, willing and able to operate the service it has applied for, finds its application thrown out because of restrictions so tight as to make it virtually impossible for a steamship line to obtain air route authorizations.

The route, of course, will be no economic bonanza. The examiners estimated that probably 4000 round trip passengers would utilize the service in the first few years it is operated. Their gross revenue at 5.5 cents per mile, assuming all made 8,500 mile trips, would total \$1,870,000. U. S. to South African mail is estimated at some 75,000 lbs. per year; foreign mail at half that amount. Assuming an annual average of 100,000 lbs. of cargo in each direction, and a rate of \$3 per lb. for mail and cargo, the examiners compute the annual mail and express revenue at \$937,500. Estimated mail, passenger and cargo revenue totals \$2,807,500.

Against this figure, the examiners balanced estimated annual operating expenses based on \$2 per mile for two

Its projected schedule frequencies range from two to four per week, with a possible fifth during peak months. Passenger fares according to PAA exhibits, would range on a sliding scale from 4.25 to 5 cents per mile, with the lower rates effective for longer trips. The one way "sit-up" New York-Johannesburg fare would be \$368; a berth would cost \$92 additional.

Rejected by the examiners were applications of American Export Airlines, Inc.; American South African Line, Inc.; PCA; Seas Shipping Co., Inc.; and U. N. Airships, Inc. Intervenors were Eastern Air Lines; TWA; Department of Justice; U. S. Maritime Commission; Baltimore Aviation Commission; the City of Miami; the Port of New York Authority; the City of Norfolk, Va.; and the City of Philadelphia.

National Names Two Directors

J. C. Brawner, assistant to President G. T. Baker of National Airlines, was elected treasurer of the company as well as a new director at the annual meeting of stockholders. J. D. Crane, v. p., in charge of maintenance and engineering, also was elected a director.

Page Asks CAB to Dismiss Its Economic Investigation

Motion Claims Board Lacks Jurisdiction Over Carrier

THE Civil Aeronautics Board's economic investigation of the air carrier activities of Page Airways, Inc., took a new turn during the past fortnight when Page attorney Albert F. Beitel filed with the Board a motion asking dismissal of the proceeding for want of jurisdiction.

Beitel's motion, buttressed with numerous legal citations, claimed simply that Page was not a common carrier; that CAB had no jurisdiction over operators who were not common carriers; and that therefore the present investigation lay beyond the scope of CAB's legal powers.

From a series of court decisions, the Washington attorney and former CAB examiner summarized the essential qualifications of a common carrier as one:

- (1) Engaging in the business of carrying others as a public employment.
- (2) Holding out to the public that the carrier will carry for all indifferent so that,
- (3) If carriage is refused, the carrier will become liable to an action by the aggrieved party for such refusal.

Page, he declared, had not carried passengers as a public employment. It operated under contract to the Florida Shipbuilding Corp., and to five other companies subsequently contracted with, and the ship was flown at the demands of the six firms. Beitel declared that the record did not show affirmatively that Page had been carrying passengers as a public employment. It had not advertised schedules, fares routes or departure times, had not issued tickets, and had not established rules and regulations stipulating conditions under which passengers would be carried. These, he said, were all characteristics of common carriers, and lacking them, Page's operation could not be called a common carrier business.

Must Prove Jurisdiction

In view of these contentions, Beitel asked the Board to dismiss the proceeding, asserting that before CAB can take any further action in the case, it must show affirmatively on the basis of the record that it does have jurisdiction. He also requested oral argument to support his motion for dismissal.

Shortly after Beitel's motion was filed, Public Counsel Philip Schleit and Albert F. Grisard filed a strongly worded memorandum opposing his contentions, characterizing as "spurious" the arguments presented to show that Page was not a common carrier.

Like Beitel, Public Counsel studded their report with citations of previous cases regarding the legal definition of common carriers, attempting to show that Page's Rochester-Miami operation had most of the characteristics of a common carrier. The lack of advertising, they said, was not conclusive proof that the company had not been operating as a common carrier.

The memorandum contained a detailed rehearsal of the relations—contractual and otherwise—between Page Airways and the Florida Shipbuilding Corp. and later five Rochester corporations, designed

to show that Page planes were not operated at the demand of the companies contracted with in the later phases of the companies' activities. According to Public Counsel, Page did not notify its employees that its contract with the shipbuilding firm had been terminated on March 29 until after April 27, "which obviously had the effect of continuing the impression of a charter agreement while selling passage to the general public." The shipbuilding company, they said, used Page's service only four times between March 2 and April 27, 1945, paying for the transportation on a seat basis.

Public Counsel interpreted the act that "Page grossed only \$1,956 on southbound flights as opposed to \$10,311.88 on northbound flights" as evidence that "the service was operated to a large extent for the vacation and other traffic it might bring out of Florida, viz., the general public."

They concluded that the facts of record in the case showed conclusively that Page had been functioning as a common carrier, and they urged the Board to deny Page's motion for dismissal of the proceeding.

No Board action on Page's motion had been taken as this issue of AMERICAN

AVIATION went to press, but it appeared likely that the proceeding would not be dismissed. If the Board refuses Beitel's motion, the next procedural step will be the issuance of a report by Examiner William F. Cusick.

The Aeronautical Training Society, a group of 48 fixed base operators, was permitted to intervene in the proceeding. ATS is interested in the possibility that the Page investigation may bring changes in the Board's regulations regarding non-scheduled operations which might affect the businesses of the Society's members.

Western, United Oppose New Feeder Services in West

In final briefs to the Civil Aeronautics Board before oral argument in the West Coast Case, both United Air Lines and Western Air Lines have contended that additional north-south service in the Pacific Coast area should be operated by existing carriers rather than by Southwest Airways which was recommended for a certificate by Examiner F. Merritt Ruhlen.

Western asserted that the route should be given to an experienced carrier, capable of competing with United. United, on the other hand, feels that the service to numerous coastal points can be provided more logically by certifying those points on its present route system. Both carriers agreed in opposing the introduction of an entirely new feeder line into the West Coast picture.

No Consistent Pattern Shown by CAB In Expanding Domestic Air Services

A tabulation by AMERICAN AVIATION of new route authorizations during the seven years since creation of the Civil Aeronautics Board revealed that although the CAB has been expanding domestic services at a fairly rapid rate, there apparently exists no consistent pattern of philosophy behind the Board's actions.

The tabulation included the populated areas contained in the recent Great Lakes-to-Florida and Montreal-Washington decisions. Approximately 28,500 miles have been added to the pre-CAB total of 39,267 route miles to make a current total of about 67,000.

Judging from the Board's actions for the past year, it would appear that the CAB is considering each case individually without any over-all planning for a national route structure. Observers have concluded that the Board makes up its

collective mind as to which carrier shall be given a certain route and then the Board casts about for reasons to support the finding.

Several years ago it seemed that the CAB was striving for a national pattern of about eight major systems together with a number of regional feeders. The Board apparently has abandoned this idea in the light of decisions within the past year.

During the seven years the domestic awards have all gone to airlines holding grandfather certificates with one exception—Essair, Inc., which holds a three-year certificate.

The tabulation, which is approximate throughout, shows U. S. cities certified on domestic airline routes by the CAB since awarding of grandfather certificates:

	Total New United States Populations Added to System	Number of New Cities Certified
National Airlines, Inc.	15,215,156	8
Northwest Airlines, Inc.	14,247,732	7
Pennsylvania-Central Airlines	14,052,758	20
Northeast Airlines, Inc.	12,510,307	10
Eastern Air Lines	8,352,575	14
Transcontinental & Western Air	8,153,970	17
Delta Air Corporation	6,921,763	17
United Air Lines, Inc.	6,775,479	14
Chicago & Southern Air Lines	4,307,966	14
Colonial Airlines, Inc.	3,254,187	11
Mid-Continent Airlines, Inc.	2,464,094	13
Western Air Lines	2,029,522	20
Continental Air Lines, Inc.	1,633,923	15
Braniff Airways, Inc.	1,383,363	12
American Airlines, Inc.	1,144,341	8
Essair, Inc.	754,320	6

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AVCO-American Relations To Be Investigated by Board

Question of Control of AA Stock to be Chief Issue

THE Civil Aeronautics Board, in an unexpected move, announced last fortnight that it had instituted an investigation of The Aviation Corporation to determine whether that company had acquired and now holds financial control of American Airlines through its ownership of 287,538 shares or 22.28 percent of the carrier's outstanding voting stock.

The purposes of the investigation include a determination of whether "if such control has been acquired, and is held, such acquisition and the continued maintenance of the relationship established thereby are not, or will not be, consistent with the public interest" and, if control does exist, "what further action, if any, should be taken by the Board" under the Civil Aeronautics Act.

AVCO, under the terms of the Act, is considered a "person engaged in a phase of aeronautics" through its extensive holdings in a variety of aviation enterprises both manufacturing and operating. Its interest in American Airlines apparently began in 1941, when it acquired 193,769 shares of the airline's common stock, which then constituted 33.7 percent of the outstanding voting stock of the company and the largest single block owned by any one party. Since that time, AVCO's holding has been increased to 287,538 shares, although the percentage has decreased to 22.28. The next largest block, however, is said by CAB to amount to only approximately 1.47 percent of the outstanding voting stock. The Board pointed out that these acquisitions had been made without CAB approval, and that no application for approval is on file or pending.

Has Pan Am Holdings

Since July 9, 1941, pursuant to a trust agreement between AVCO and Jesse H. Jones, as trustee, "all of the shares owned beneficially by the Aviation Corporation in American Airlines, Inc. have been deposited in a non-voting trust," which under the terms of a Supplemental Trust Agreement dated March 30, 1944, will expire "six months after the termination of the National Emergency existing on the date of the execution of said Supplemental Trust Agreement." Presumably the expiration of the non-voting trust would mean that the stock would revert to AVCO as voting stock, through the ownership of which AVCO could, should it desire, exercise a measure of control over American Airlines' affairs.

The Board order also pointed out that AVCO is the largest single stockholder of Pan American Airways Corporation, parent company of Pan American Airways, Inc., holding a block amounting to 8.32 percent of the corporation's outstanding common stock.

Observers recalled that AVCO's holdings in PAA and American had been the ground for contentions made by Transcontinental & Western Air's attorney George Spater during oral arguments in the North Atlantic Route Case, that PAA and American, through common owner-

ship and probable control, could not be expected to operate trans-Atlantic services in sharp competition with each other.

CAB Examiner Recommends AA Non-Stops; TWA Protests

American Airlines' proposed Oklahoma City-Phoenix and Oklahoma City-Tucson non-stop services received the approval of CAB Examiner James S. Keith in a report issued last fortnight. Keith declared that the mileage and time savings non-stop operation would make possible outweighed the possible diversion of business from Transcontinental and Western Air.

The report pointed out that with DC-3 equipment and present airway facilities, American would be required to operate the non-stops over substantially the same routings now in effect, with the only time savings resulting from the possible elimination of stops. The Oklahoma City-Phoenix non-stop will be flown over the somewhat shorter airway now used by TWA via Amarillo, Albuquerque and Winslow, Ariz.

Northwest Will Make Plea For Seattle Anchorage Route

Northwest Airlines will make a strong plea for a Seattle-Anchorage route in oral arguments in the Pacific Case (Docket 547 et al.) now scheduled for Oct. 29. The company attorneys will oppose the CAB examiners' recommendation of Alaska Airlines to operate a Seattle-Anchorage service as failing "to recognize the importance of Seattle as a gateway for Oriental traffic."

Northwest maintains that service over this segment should properly be integrated with U.S.-Asia traffic moving over the New York-Chicago-Anchorage route for which Northwest has been recommended by CAB Examiners Ross I. Newmann and Lawrence J. Kosters in their report on the Pacific Case. Such integration would feed traffic destined to Asia into the north Pacific route through a junction at Anchorage. Northwest's economic studies show that during the first few years of operation, the Seattle-Alaska segment of the North Pacific route will probably carry two or three times as much traffic as the cut-off across Canada.

The company will also contend that the rapid industrial growth of the Pacific Northwest, its strong historical community of interest with the Orient, and its bright prospects for continued commercial and industrial growth make a direct Seattle-Asia air service a real necessity.

OPA Investigation of Pan American Fare Cut in Panama Sets Off Controversy

Airline attorneys are watching as a possible precedent-setter a Civil Aeronautics Board proceeding in which the Board, on complaint of the Office of Price Administration and the Central Labor Union National Trades Council of the Panama Canal Zone, is investigating a proposed reduction in the discount allowed for government travel over Pan American Airways and three affiliated carriers.

The case involved an unusual attempt by an OPA attorney to force Pan American to present revenue and expense figures which the airline was unwilling to prepare and which a CAB examiner ruled it was not required to produce.

The proceeding began when tariffs cutting the government travel discount from 25 to 15 percent were filed by Pan American; Panagra; Uraba, Medellin and Central Airways, Inc. (UMCA); and Compania Mexicana de Aviacion, S. A. (CMA). OPA protested that this cut amounted to a fare increase inconsistent with its price stabilization program. The Canal Zone Labor Union, through Charles F. Wahl, its representative, also objected to the cut as unreasonable.

At a prehearing conference, OPA attorney Malcolm D. Miller requested that PAA furnish exhibits showing gross revenues under the 25 percent discount and under the proposed 15 percent discount, as well as expense data to permit a determination of net revenue. PAA attorneys opposed preparing the figures, claiming that the case was not a rate proceeding. CAB Examiner Thomas L. Wrenn stated that he was "unable to see the materiality of the data to the issues involved" and said that he would not

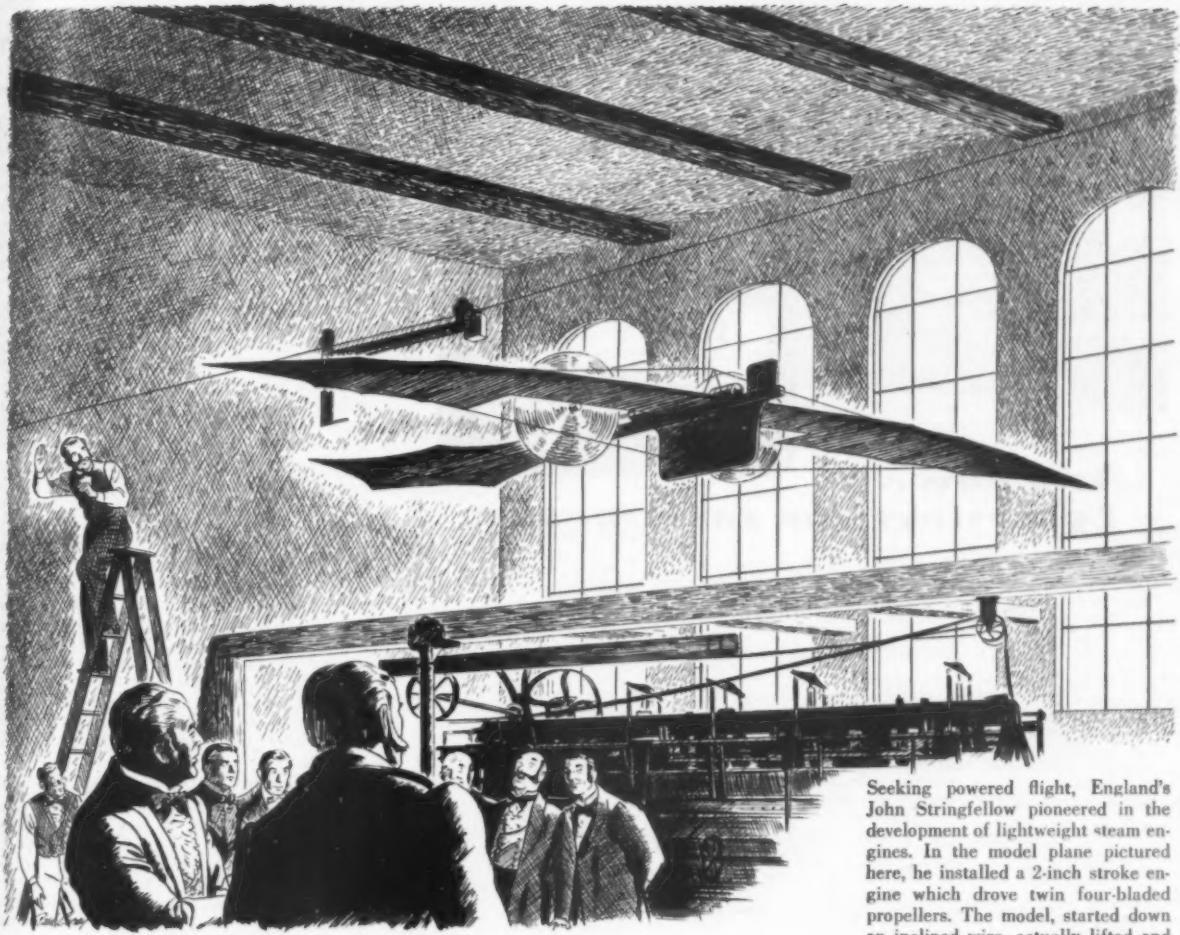
direct PAA to produce the figures over its objection.

The OPA attorney later renewed his request in a letter, adding that if Pan American were agreeable, OPA would like to assign accountants to obtain the data from PAA's books. The examiner repeated that he would not direct PAA to produce the figures, but would not object to OPA's examining the books provided it could reach some mutual agreement with Pan American. OPA had not approached Pan American with any such proposal as this issue of AMERICAN AVIATION went to press, and presumably was allowing the matter to drop.

Public Counsel Harry A. Bowen and James L. Highsaw, Jr., stated at the pre-hearing conference that their position would be that any discounts were generally discriminatory and unlawful. Pan American's lawyer stated that he would not oppose this contention, inasmuch as PAA was anxious to eliminate discounts on its entire system and had done so except on the Latin American division. The proposed reduction from 25 to 15 percent, he said, was a step in this direction.

These views, however, placed the OPA, who opposed any reduction in the discount, in the somewhat peculiar position of favoring the continuance of a practice which may amount to special privilege.

The discounts are a distinct advantage to residents of the Canal Zone and members of the armed forces traveling between Caribbean points and the United States. Since the beginning of the war PAA has provided almost the only means of transportation in the area.



Seeking powered flight, England's John Stringfellow pioneered in the development of lightweight steam engines. In the model plane pictured here, he installed a 2-inch stroke engine which drove twin four-bladed propellers. The model, started down an inclined wire, actually lifted and was able to sustain flight for 120 feet

John Stringfellow taught engine power to fly

*Nine pound model built in 1848 was
first to lick the LIFT-DRAG ratio*

Lift divided by Drag equals "X." As we increase the *Lift* which is caused by air passing around the wing—or as we reduce the *Drag* caused by the plane's passage through the air—we get a better "X." We get an airplane that flies higher or faster or carries greater loads on less fuel.

Compare, for example, the improvement that has come in *Lift* surfaces. The fragile biplane wing of the

past had just enough *Lift* to leave the ground. The modern Northrop-designed 66 foot wing of the Black Widow P-61 raises 30,000 pounds of plane and bombs into the stratosphere. And even this Northrop wing is only a beginning.

Major developments to cut down *Drag* also have come from Northrop . . . including the first multicellular internally-braced wing in 1929, the

stressed-skin fuselage in 1930, innovations in wing and fuselage shapes as in the 1934 Northrop Gamma and lighter, smoother construction through heliarc welding of magnesium, 1940.

Improving the *Lift-Drag* ratio is a continuing project at Northrop. Northrop is set to better the ratio, not only with new, improved types of propulsion, but also with new types of planes like the *Flying Wing*, which eliminates nearly every *Drag* element.

Northrop Aircraft, Inc., Northrop Field, Hawthorne, California.

Creators of the Black Widow

P-61 Night Fighter and the Flying Wing



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PCA Asks Rehearing In Detroit-Florida Case

Pennsylvania-Central Airlines filed with the Civil Aeronautics Board last fortnight a petition asking rehearing, reargument and reconsideration in the Great Lakes-Florida decision on the dual ground that subsequent developments had rendered the opinion invalid and that the majority was in error on several points.

The airline cited as reasons for reconsideration which have developed since the decision was issued: (a) the fact that PCA had reduced its passenger fares to a four and one-half cents per mile level, thereby cutting its own income some 21%; (b) that a Board member who participated in the majority opinion has since resigned; (c) that V-J Day had been declared, throwing the entire national economy into a reconversion period; and (d) that Rochester had been added to PCA's system by the Board's Washington-Canada decision.

PCA's petition declared that Edward P. Warner's resignation left the Board evenly divided on the Great Lakes-Florida question, and stated that a change in the personnel of a court which had rendered a divided opinion was considered sufficient grounds for reconsideration, especially where such a situation left the judicial body evenly divided.

The majority, in its award of a Detroit-Miami route to Eastern, had declared that its record as a low cost operator was entitled to some consideration in the proceeding. PCA's petition labelled the use of this factor in selecting Eastern for a route award "a novel doctrine," and asserted that it set a new and dangerous precedent in making low cost operation a factor in route cases.

PCA also attacked the conclusion of the majority that the fact that Eastern required less new route mileage to establish a Detroit-Miami service was a consideration in selecting it over PCA, countering with the claim that PCA should have received the route because its proposals would give more new one carrier service to a far larger population.

One of PCA's strongest objections was levelled at a statement in the majority opinion that PCA's Route 14 could support competition between Detroit, Cleveland and Akron. The opinion pointed to "the uniformly high level of passenger fares maintained between these points, and well as on the remaining portions of Route No. 14" as a factor in concluding that competition was warranted.

Passenger fares, said PCA's petition, should properly be considered in a rate case and not in a new route proceeding. Its petition quoted a section of the Civil Aeronautics Act which empowers the Board to determine rates, and stated that "for the majority to attempt to circumvent the specific provisions of the Act hereinabove quoted by using the indirect method of placing unwarranted competition over a vital segment of a carrier's system in a new route case is establishing not only a dangerous precedent but one which, if permitted to stand, will constitute a denial of a fair hearing and due process."

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CAB Proceedings

(A Summary of Applications Filed, Orders Issued, and Future Actions of the Civil Aeronautics Board.)

Orders:

4017-Withdrawing Alaska Airlines' application in Docket 863 from a consolidated proceeding and deferring hearing upon it until after the Board's decision in the Pacific Case.

4018-Dismissing the application of Alaska Airlines, Inc., in Docket 873 at the company's request.

4019-Dismissing the application of Alaskan Airlines for a Fairbanks-Juneau exemption order at the company's request. (Docket 920)

4020-Permitting the Port of Seattle; the Port of Tacoma; the Advisory Committee of the State of Washington; the City of Seattle and the City of Tacoma to intervene in the Pacific Case (Docket 547 et al.) Petitions of the Seattle Chamber of Commerce and the Tacoma Chamber of Commerce to intervene denied.

4021-Authorizing a Washington-Ottawa-Montreal route for Colonial Airlines; a Burlington-Ottawa extension of Colonial's present N. Y.-Canada route; the addition of Elmira-Corning and Rochester, N. Y., to PCA's Route 34; and the addition of Elmira-Corning and Binghamton, N. Y., as intermediate points on American Airlines' Route 7, Washington-Ottawa-Montreal Case. (Docket 609 et al.)

4022-Authorizing Alaska Airlines by temporary exemption orders to operate: (a) mail service between Unalakleet and Anchorage via McGrath; (b) mail, passenger and property service between Akulurak and Mountain Village; (c) mail, passenger and property service between Haycock and Golovin; and (d) mail, passenger and property service between Koyuk and Golovin. (Docket 1994).

4023-Notifying Western Air Lines that the national defense no longer requires a delay in inaugurating service to and from El Centro, Palm Springs and San Bernardino, Calif., on Route 13.

4024-Denying Trans-Marine Airlines, Inc., permission to intervene in the proceeding in which Northeast Airlines is seeking consolidation of its Routes 27, 65, and 70. (Dockets 1084 and 1607).

4025-Authorizing Continental Air Lines temporarily to suspend service to Hutchinson, Kansas on Route 60; to Las Vegas, N. M., on Route 29; and to La Junta, Colo., on Route 43, because of the removal from Continental's fleet of an aircraft damaged in a recent accident.

4026-Permitting Continental Air Lines to inaugurate non-stop service between Denver and Albuquerque on Route 29.

4027-Approving an agreement between United Air Lines and Transcontinental & Western Air relating to the use of United's plane cleaner unit at Washington National Airport by TWA. (Agreement C. A. B. No. 414).

4028-Permitting the National Federation of American Shipping to appear as *amicus curiae* in the Hawaiian Case (Docket 851 et al.) and to offer oral argument.

4029-Instituting an investigation of service suspensions at Clarksburg and Morgantown, W. Va., by PCA, TWA and American Airlines. (Docket 2030).

4030-Rescinding a Board order of May 25, 1945, relating to an agreement between Pan American Airways and Panair do Brasil, and substituting Order 4035. (Docket 2032).

4031-Instituting an investigation into an agreement between Pan American Airways and Panair do Brasil relating to the furnishing of certain facilities and services to Pan American. (Docket 2032).

4032-Consolidating applications of Edward F. Zedeker (Docket 1902); Purdue Aeronautics Corporation (Docket 1993) and Trans Ohio Airlines, Inc. (Docket 2013), with the Great Lakes Area Case. (Docket 535 et al.)

4033-Denying American Airlines permission temporarily to suspend service to Windsor, Ontario, on Route 7.

4034-Denying the City of Nashville, Tenn., permission to intervene in the North Central Case. (Docket 415 et al.)

4035-Extending from Sept. 23 to Dec. 27 the period during which tariffs reducing the government travel discount provisions on Pan American, Panagra, UMCA, and CMA are under Board suspension. (Docket 1941).

4036-Instituting an investigation into the stock holdings of The Aviation Corporation in American Airlines, Inc. (Docket 2052).

Calendar:

October 1—Oral argument, Rocky Mountain Case. (Docket 152 et al.) Postponed from Sept. 10.

October 1—Briefs due, Cincinnati-New York-Additional Service Case. (Docket 221 et al.)

October 1—Deadline for exchange of exhibits in Mississippi Valley Case. (Docket 548 et al.)

October 1—Hearing, Great Lakes Area Case. (Docket 535 et al.) Indianapolis, Ind. Examiner William F. Cusick.

October 4—Oral argument in Florida Case (Docket 489 et al.) Postponed from Sept. 17.

October 15—Deadline for briefs in the Pacific Case (Docket 547 et al.) Postponed from Oct. 1.

October 22—Rebuttal exhibits in Mississippi Valley Case due. (Docket 548 et al.)

October 22—Oral argument in West Coast Case. (Docket 250 et al.) Postponed from Oct. 8.

October 29—Oral argument in Pacific Case. (Docket 547 et al.) 10 a. m., Room 5042, Commerce Department.

November 5—Hearing, Mississippi Valley Case. (Docket 548 et al.) New Orleans, La. Examiner Ferdinand D. Moran.

November 30—Exhibits due in Middle Atlantic States Case. (Docket 674 et al.) Postponed from Nov. 1.

December 3—Hearing, Kansas City-Memphis-Florida Case. (Docket 1051 et al.) Tentative.

December 3—Hearing, Middle Atlantic States Case. (Docket 674 et al.) Tentative.

Applications:

Alaska Scenic Air Service (V. D. Traskowski and Paul F. Richardson), Seward, Alaska, for a permanent or temporary certificate of an exemption order authorizing non-scheduled passenger and freight service within the Third Judicial Division of the Territory. (Docket 2026).

The Great Cross Airlines, Inc., c/o B. A. Babb, 409 Avenue G, N. W., Childress, Texas, for a permanent or temporary certificate to authorize scheduled mail, passenger and express feederline service over a 958 mile route between Galveston and Denver via various intermediate points. (Docket 2025)

Island Air Ferries, Inc., c/o Frederick H. Smith, Bohemia, N. Y., for a permanent or temporary certificate to authorize scheduled mail, passenger and property service between Rye Lake, N. Y., and New London, Conn., via various intermediate points, and between Islip, N. Y., and New Haven, Conn., via Bridgeport, Conn. (Docket 2029)

Northern Airways, Anchorage, Alaska, for an exemption order permitting charter service within a radius of 200 miles of Banks, Alaska. (Docket 2020)

Via-Air, St. Clair County Airport, Port Huron, Mich., for a certificate to authorize non-scheduled mail passenger and express service between Port Huron, Sandusky, Bad Axe, Caro, Saginaw Bay City, Lapeer, and Detroit, Mich. (Docket 2024)

Virginia Stage Lines, Inc., Charlottesville, Va., for permanent or temporary certificates authorizing scheduled mail, passenger and express service by conventional aircraft or helicopter between: Charleston, W. Va., and Norfolk; Charleston and Washington; Washington and Wilmington, N. C.; Wilmington and Chattanooga, Tenn.; and Washington and New York, all via various intermediate points. (Docket 2023)

New Services

American To Increase Schedules With C-54s

American Airlines will increase its present schedules by more than 300% during the next six months, the company announced. The increase will be accomplished by the addition of 50 or more Douglas C-54 type aircraft to the fleet.

These transports will permit longer distance, non-stop flights, and the services between principal cities served by American will be improved, the announcement said. New services to be established include:

Frequent non-stop service between New York and Chicago and between Washington and Chicago; inauguration of one-stop service between New York and Los Angeles, between New York and Mexico City and between Los Angeles and Mexico City. Provision is also made for frequent four-engine non-stop service between New York and Washington and between New York and Boston. Passenger fares will not be increased, and DC-3 equipment will continue to be used for short-hop service.

Pan Am Runs Extra Section

First postwar extra flight section on Pan American Airways' New York-Bermuda schedule departed from New York Sept. 22. This section brought to three the total weekly flights to Bermuda for the week ending Sept. 22. Pan Am reminded prospective travelers that passports and visas are no longer required of U. S. citizens in many countries of the western hemisphere.

Brannif Expands Express Service

Expanded air express service to and from Mexico via facilities of Brannif Airways was announced by the Air Express Division of Railway Express Agency. Publication of a new international air express tariff by Brannif has established cargo rates on flights between Dallas-Fort Worth, Laredo and San Antonio, Texas and Ciudad Victoria, Merida, Puebla and Vera Cruz, Mexico.

All American Increases Flights

Two additional daily flights on its air pick up routes serving 31 cities from Pittsburgh through Harrisburg to Philadelphia were started by All American Aviation Sept. 10. This doubles airmail service to Harrisburg where air post has jumped from 3201 pieces monthly in 1940 to 45,041 in the current year.

Pan Am Increases Flights

Pan American Airways' daily Miami-Barranquilla operation now has ten weekly flights with the addition of three flights between Cienaga and Barranquilla, international air gateway for Colombia. Avianca, PAA's nationalized Colombian affiliate, which flies the latter route, has two weekly flights to Riohacha from Barranquilla by Cienaga.

MCA Into Ft. Smith

Announcement of airline service into Fort Smith, Ark., from Tulsa, Joplin, Kansas City, Des Moines, Omaha, Sioux City, Sioux Falls, Huron and Minneapolis, and to the south from New Orleans, Shreveport and Texarkana was made by J. W. Miller, President of Mid-Continent Airlines. The new service effective Sept. 18 into Fort Smith will be a direct stop in the company's "Twin Cities to the Gulf" route.

Stall Speed Elimination Points Up CAB Hearing

CAR Part 04 Discussions

Stress Transport Safety

WITH elimination of the stalling speed requirement the main point at issue—a point which Ralph S. Damon, president of American Airlines, characterized as "one of the most important and urgent matters confronting the airlines today," the Civil Aeronautics Board held public hearings last fortnight on its proposed revisions to Part 04 of the Civil Air Regulations establishing Airworthiness Requirements for Transport Category Aircraft.

The stall speed discussions occupied two full days out of the four and one-half day hearings. The Civil Aeronautics Administration, represented by C. F. Dycer, the Air Transport Association, and 10 out of 11 manufacturers advocated that the present 80 mph landing speed and 85 mph approach speed be eliminated completely from the new regulations on the ground that they did not add to safety, but did impose an added economic burden. One manufacturer, Lockheed Aircraft Corp., and the Air Line Pilots Association opposed elimination or raising of the present requirements on the ground that it would impose an added safety hazard.

Dycer pointed out that the CAA had opposed stall speed limitations for five years, and that he believed that safety factors were more adequately taken care by new climb, length of field, and minimum weather requirements expressed as a function of stall speed.

C-97 Tests Cited

The manufacturers' case was presented by a delegation headed by Wellwood Beall, M. F. Vannick and George Schairer of Boeing, Dr. Bailey Oswald of Douglas, and A. E. Lombard, Jr., Consolidated Vultee. Much of the testimony was based on recent tests of the Boeing C-97 with a 95 mph landing speed under DC-3 operating minimums at the Seattle airport. Oswald presented figures on the experience of the Air Transport Command and ATC contract carriers with C-54 at weights far above that permitting an 80 mph landing speed. Lombard cited the experience of Consairway division with the C-87 Liberator Express. C. Hart Miller, executive vice-president, Republic Aviation Corp., presented figures showing that the accident rate of the P-47 Thunderbolt had actually gone down as the stall speed went up, although he stated that he did not intend this as evidence that higher stall speeds were actually safer.

The ATA presented six witnesses including, Damon, William Littlewood, vice-president engineering, American Airlines, George Gardner, vice-president operations, Northwest Airlines, and three pilots, all of whom had participated in the C-97 tests—Capt. Scott Flower, Pan American Airways, Walter Addems, United Air Lines, and Al Wilson, Pennsylvania-Central Airlines. Littlewood pointed out that the present stall speed limits could actually decrease safety since they limited operating weights and as a result would discourage the use of heavier and more powerful engines and the carrying of additional safety devices which would mean a reduction in payload. The ATA delegation pointed out that no foreign coun-

tries had stall speed limits, and that this would place American operators at a disadvantage on international routes.

Lockheed, represented by C. F. "Kelly" Johnson and Hall Hibbard, opposed lifting the requirements at the present time because of the hazard involved under instrument conditions, but stated Lockheed would not oppose lifting the requirements once suitable blind landing devices had been developed. Other manufacturers and the operators suggested that it would be better to handle this by imposing different weather minimums on aircraft with high stall speeds, and lowering these as new navigational devices were installed. Edward P. Warner, CAB vice-chairman who presided at the hearings carefully ruled all discussions of motive out of the testimony.

ALPA, represented by John Dickerman, a lawyer, opposed elimination or raising of the requirements as a safety measure. He said that the ALPA had not had time to prepare for the hearings, and confined his testimony to an editorial in the July issue of the *Air Line Pilot*.

Manufacturers Disagree

A second major issue was whether a separate cargo category permitting the use of emergency power ratings to meet one-engine inoperative climb requirements both at take-off and during normal flight should be established. This was favored by the manufacturers and the CAA, and opposed on the grounds of safety by ALPA. The operators suggested that the question be left open and a separate hearing held at a later date.

There was some disagreement between the manufacturers represented by the Aircraft Industries Association of America and the operators on varying one-engine inoperative climb requirements for two engined and four engined aircraft. The AIAA suggested a sliding scale with the factor being increased with the number of engines to insure adequate full power climb on multi-engine aircraft of the future. The ATA pointed out that while failure of one engine could be expected more frequently as the number of engines increased, if the one-engine inoperative requirement were safe for two-engine aircraft, it would likewise be safe regardless of the increasing frequency.

Major issues between the CAA and the manufacturers on structural and power plant requirements which had seemed insoluble, were compromised for the most part before they came up for discussion, and a fairly united front was presented on these points.

The matter of reverse thrust propellers for meeting landing distance requirements was discussed, and while some manufacturers believed they should be permitted, the general consensus was that there was not sufficient experience yet available to rule on this point.

The effective date for the new regulations came in for some discussion, and Dycer proposed that the new regulations become effective immediately the Board handed them down, but that manufacturers be given an option of complying in full with either the new or the old regulations—not part of each—for a period of two years. Some manufacturers felt this was not long enough.

How Much Speed

An effort by Board members Harlee Branch and Oswald Ryan to get manufacturers to name without prejudice what they thought would be a fair stall speed limit in the event the Board rejected their request for complete elimination of the stall speed requirement, brought forth some startling answers at the recent CAB Part 04 hearings.

The first time the question was asked Wellwood Beall, Boeing vice-president engineering, said he might as well pick a number out of the air and suggested 300 mph. The second time the question was asked the manufacturers said it was impossible to set a figure without prejudicing their previous testimony, but C. F. Dycer, CAA, finally volunteered 125 mph without saying whether for the approach or landing configuration.

New Direct Fuel Injection System Bettered Performance

A direct fuel injection system which has been in use for some time on B-29 Superfortresses, and was reportedly used on both aircraft used to drop the atomic bomb and on one of the three B-29s



Cutaway Showing Fuel Injection System Applied to R-3350 Cylinder.

which flew non-stop from Japan to Chicago, was announced last fortnight by Bendix Aviation Corp. and Wright Aeronautical Corp.

The new system, which accurately meters the fuel and injects it under pressure directly into each cylinder, is said to facilitate engine starting with less warm-up time, achieve a faster rate of climb to high altitudes, improve acceleration, cooling and engine operation in both

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EVERWHERE YOU LOOK, YOU SEE

Sensenich Propellers

THAT is not an idle boast. Sensenich, in twenty years, has become the world's largest manufacturer of wood aircraft propellers. There is scarcely a pilot in America who hasn't flown behind a Sensenich propeller.

For years, Sensenich has been *standard equipment* on aircraft powered under 250 HP made by leading aircraft manufacturers.*

Sensenich is stocked and sold by all of the country's leading distributors who, in turn, supply hundreds of aircraft service operators and other retail suppliers.

When you visit airports or schools, military or civilian, look at the flight lines. You'll find Sensenich *right on the nose*, nine times out of ten.

When you leaf through the pages of your favorite aviation journals and directories, note the propellers on the ships shown in the editorial pages as well as in the advertisements. More often than not, if the propeller is made of wood, you can see a tiny trade mark shaped like this:



That is the sign of Sensenich . . . the sign of a good propeller . . . a sign you can trust. Sensenich Brothers, Adjacent to Municipal Airport, Lancaster, Pa.; West Coast Branch, Glendale, Calif.

*Piper, Aeronca, Taylorcraft, Fairchild, Culver, Stinson, Ryan, Ercoupe, Grumman, Bellanca, Howard, Luscombe, Meyers, Monocoupe, Porterfield, Rearwin, Funk, Boeing.



Swing a  and be Sure

PROPSHOP Repair service now available on any type
wood propellers. Prompt service. Address Sensenich Brothers
PROPSHOP, Lancaster, Pa., or Glendale, Calif.

normal and emergency power ranges, minimize backfiring, fire and icing hazards, and stabilize operations at lean fuel mixtures, thus reducing fuel consumption.

As against these advantages, the fuel injection system weighs more than conventional carburetion, and is said to add somewhat to the maintenance problem. As a result, there is some doubt as to whether R-3350 engines for commercial aircraft will be fuel injection equipped. This is particularly true in the case of short and medium range types.

Northwest Will Undertake Ice Prevention Studies

Studies in methods of preventing ice formation on aircraft will be undertaken by Northwest Airlines this winter atop Mt. Washington, N. H. The project will supplement similar studies now being made by the AAF at Wold-Chamberlain Field, Minneapolis.

Wind velocities as high as 239 mph have been recorded at the top of the 6,284-ft. mountain, according to Capt. Robert Koelling, Army Liaison officer in charge of the project. Winds of 150 mph are common during the winter months. High moisture content, added to severe winds, presents ideal conditions for icing studies. Constant weather conditions are expected to speed research work and elimination of need for an airplane will reduce the cost of the studies, Capt. Koelling said.

Equipment is now being installed at the Mt. Washington summit base by Jack Goss and D. E. Holloway, research engineers from the Minneapolis ice research base. William Droege has been named chief project engineer to compile and analyze data obtained this winter. R. M. Potter, chief engineer for the entire project, will supervise the work.

DuPont Develops New Device For Air Spraying Operations

A new development recently announced by E. I. duPont de Nemours & Co. may further increase agricultural utilization of aircraft after the war. The new duPont product is a hormone spray, containing naphthalene acetic acid in emulsifiable oil to reduce pre-harvest drop of apples and pears, and to help produce better yields, size, color and quality, and lessen dropage caused by untimely winds and jarring without affecting normal ripening.

The new material, duPont reports, is a variation of its Parmone pre-harvest fruit drop inhibitor which has been used successfully for several years, but which was only effective for ground spraying and dusting. It was especially developed for spraying from a moving aircraft, and a pint of the diluted spray—11 parts Parmone to 19 of water—will cover an average tree as compared to 25-40 gallons of the previous materials needed to apply an approximately equivalent amount of naphthalene acetic acid.

The agitation of the air by the aircraft propeller, duPont said, helps disperse the mist evenly over both surface and interior areas of the trees.

Maintenance Superintendent Invents Air Speed Switch

An airspeed switch to prevent belly landings by warning the pilot when speed drops below 100 mph with the wheels still up has been developed by Joe Wischler, superintendent of maintenance at Falcon Field, Southwest Airways' flight training base near Mesa, Ariz.

Made from parts of an old airspeed indicator, the device works on a bellows principle governed by the speed of the aircraft. When the airspeed drops below 100 mph, a light flashes on the instrument panel and continues to flash until either the wheels are down and locked or the aircraft speed has been increased above 100 mph.

While the present device is governed by 100 mph, similar devices operating at slower speeds could be made for slower aircraft.

Complete Airport Radio Station Goes on Sale

A complete airport radio station ready to plug into a socket and start working has been developed by Aireon Manufacturing Corp. to simplify the equipping of new airports.

Designated as the Type RS-1 50-watt radio station, the new equipment is described as a complete combination unit ready for installation except for the antenna supporting poles. It is designed for airports, airlines and other similar users, and may be used for point to point, or ground to aircraft communications, or as a tower control station.

The set's have simple, push-button control, and require no dialing or tuning as each channel is pre-tuned and crystal controlled. The equipment can be operated by third class operator personnel

since all tuning adjustments and all components are enclosed, the only operations controls required being mechanically interlocking push buttons and a hand or foot push to talk switch.

Other features of the new station include two-channel telephone emission with frequency ranges for both day and night operation and 100 percent modulation in all frequency ranges. The channel range is 2-8 megacycles, 200-410 kilocycles, or 118-132 megacycles, with other frequencies available on special order.

Box With Collapsible Wings Subs for Cargo Parachute

A new cargo container, which is said to be an inexpensive, easily made and efficient substitute for cargo parachutes has been perfected recently by the Forest Products Laboratory. It consists of a



fiberboard and plywood box with collapsible rotors or wings, which open when it is dropped from an aircraft, limiting its rate of fall to a slow spin.

The box measures 12x12x34 ins. and will support 50 lbs. of cargo. Speed of descent approximates that of a parachute, and it can be used for fragile items such as glass with no danger of breakage. Unlike a chute, it will not drift from the wind, won't hang itself on trees and will not be dragged along the ground.

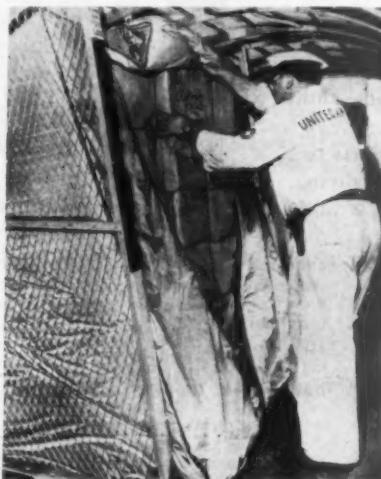
The container costs less than \$4, according to "Air Force," and can be manufactured at the rate of nearly 1,000 an hour.

Accurate Weather Reports May Be Supplied By Radar

Accurate weather forecasting is another of the services which airborne radar may be expected to supply to future commercial air transport, according to the Air Technical Service Command which has just revealed that specially equipped bombers known as radar weather reconnaissance aircraft have been in operational service for more than a year.

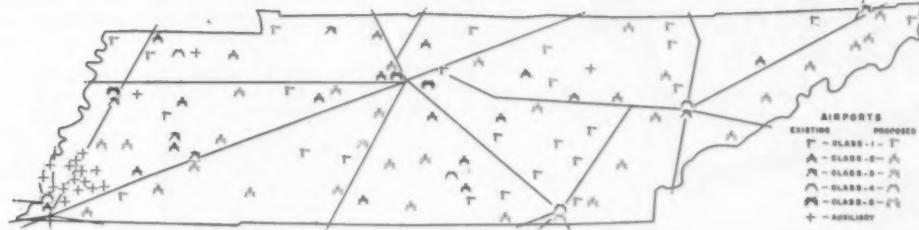
These aircraft carry a 450-lb. radar set adapted from the equipment originally developed for blind bombing. This set is trained on the surrounding air instead of on the ground, and the operator, by pushing a switch marked "Weather," gets a picture of advance cloud formations on a special detecting screen, which will detect approaching storms at a distance of 100-200 miles.

Particularly useful in the Pacific where accurate ground forecasting is extremely difficult, these airborne radar weather stations have played an important role in guiding American combat aircraft through and around violent Pacific storms and in permitting them to maintain their offensive on a round-the-clock schedule.



Gardenia Icebox—A United Air Lines cargo handler prepares to unload a shipment of gardenias from the new aerial icebox designed by Owens-Corning Fiberglas and UAL engineers for the transportation of flowers and other perishables. The container is insulated with fiberglas and cooled by five 10 x 10 x 1 in. slabs of dry ice inserted in pockets at the top. It weighs 25 lbs. and has a capacity of approximately 120 cu. ft.

Tennessee HAS THE LANDING PLACES READY!



WHATEVER you are flying, Tennessee has a proper airport ready for you. ¶ Wherever you want to go throughout the State—almost—there is an airport, a good airport. ¶ There are 6 Class 1; 16 Class 2; 6 Class 3; 5 Class 4, and 3 Class 5 airports in Tennessee. Fifty-five new fields are proposed. ¶ We need more. We are planning more. ¶ Fifty-three of the new fields will be air parks for the private flier, to make him welcome to this State where flying is fun. ¶ They will be near historic sites and resort spots of which Tennessee has many hundreds. ¶ They will be not only self-sustaining, but self-liquidating—as all our airports are now. ¶ There will be factory sites at many Tennessee airports.

Remember Tennessee IN YOUR AVIATION PLANS



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ABOUT
TENNESSEE AIRPORTS?**

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TENNESSEE BUREAU OF AERONAUTICS
BERRY FIELD, NASHVILLE, TENN.

Please send me "Tennessee Airports"

Name _____

Address _____

City and State _____ (Zone) _____



The successful development, through the cooperation of the Pennsylvania Central Airlines, a practical and economical cargo chute by SWITLIK opens the door to vastly improved service in the field of air mail and cargo delivery. Engineered by the same SWITLIK STAFF that produced the famous SWITLIK SAFE-T-CHUTE, the

SWITLIK
Cargo
CHUTE

is easily adaptable for use with large or small planes; may be dropped accurately into a small space and will safely handle the most fragile articles without special packaging. Harness and method of attachment provide maximum flexibility in package size and weight, also economy in air and ground handling.

SWITLIK CARGO CHUTES will make possible delivery of air mail and cargo anywhere, regardless of landing facilities and will thereby increase manyfold the usefulness of air transport.

Your inquiry is cordially invited and our engineering staff will be glad to cooperate with parties interested in parachute development.

Write for booklet "For Safe-T-Flying" also Manual and Chart. All free for the asking. 16mm. Film "Parachutes or Safety" available for colleges and schools.



SWITLIK PARACHUTE COMPANY

Dept. B-10 TRENTON, NEW JERSEY

Engineering Preview

Look for General Electric Co., this country's leading manufacturer of jet engines, to announce a gas turbine designed to drive a propeller in the near future.

Northrop Aircraft is understood to be planning a twin-engined medium commercial transport. No details are available, but it is rumored that it will be of conventional design powered by R-2800-C engines in a special installation with no cow flaps.

Lockheed's failure to submit a proposal in the American Airlines' twin-engined competition has caused conjecture that Lockheed hopes to get back into the twin-engined field with a jet transport sooner than expected. Many engineers believe that the medium range field is the logical commercial starting point for jet. These conjectures are born out by a recent statement by Hall Hibbard to the effect that the 12-passenger Saturn, now on the boards, will be the last Lockheed transport with conventional power plants.

The proposed North American four-engined transport reported in this column Sept. 15 is now understood to be a development of its jet-propelled four engined bomber.

Fairchild is working on a new combination primary and basic trainer with retractable landing gear for the Navy. It's designated the M-92. The mock-up was to have been ready for inspection last week, and three flight units should be completed sometime next Spring.

It is reported that the Allison Division has been drawing 2,450 hp from its V-1710 engine at 120 in. manifold pressure using 130 grade fuel and water injection. Watch for Allison to make an increasingly strong bid for commercial business, with acceptance of the DC-8 perhaps the deciding factor as to whether the DC-6 will be Allison or Pratt & Whitney powered.

The fighter used for experimental testing of the Vee or butterfly tail was a Bell P-63 Kingcobra.

Lockheed is reported to have already mocked up a Constellation with a "double bubble" fuselage similar to the Boeing 377 Stratocruiser. It is expected to have a gross weight of 100,000 lbs., and will probably be rushed into production if the CAB lifts or eliminates stall speed requirements in the transport category.

Fairchild, now operating under an eight month schedule for the Army on the C-82 Packet, expects to reach an arrangement whereby a certain percentage can be supplied to commercial users early in 1946. Present engineering estimates indicate that the Packet will be certifiable at a gross weight of 45,000 lbs., permitting payloads of up to 16,500 lbs., and that even greater loads may be possible if the CAB accepts industry recommendations for a separate cargo category. Meanwhile Fairchild engineers are working on a high capacity passenger version.

While most people consider 130 grade as a superfuel, B-17 Fortresses were using 150 grade fuel during the closing stages of the European war.

Look for at least two other airframe manufacturers, maybe more, to follow Northrop with an announcement that they are working on their own gas turbines.

The four-passenger, five-place Bell helicopter is now undergoing ground tests, and will probably be flying shortly.

Some airline engineers are worried about the maintenance aspects of the adjustable stabilizer on the Martin 202 and 228, and would prefer a fixed type. They will have to argue this out with the pilots, however, who are enthusiastic about the possibility of maintaining trim automatically when the flaps are lowered.

Under floor location of radio equipment on the 202 and 228 has likewise met with a mixed reception. Most people like the maintenance aspects, but some are afraid of the wide temperature range in this location. Martin points out that the main heaters will be located in the same compartment.

Douglas advises that the engine installation in the DC-8 is completely separate, with each engine driving one propeller just as in conventional installations. One airline engineer has suggested that an hydraulic drive might be safer than the long extension shafts, but Allison experience with shafting on the P-39, P-63 and XB-42 seems to show that there need be no real cause for concern.

Swiss interest in flying boats evidenced at the time of the DO-X still continues, according to reliable reports, and Swissair may be the first flying boat trans-oceanic line using American-built equipment.

SYDNEY CARTER.

Douglas Says Surplus Policy Cripples Output

Military Cancellations On C-74 Up Production Costs

Donald W. Douglas, president of Douglas Aircraft Co., declared last fortnight that cancellation of government contracts on the C-74 had forced the company to revise upward at least 50% its cost estimates on the commercial DC-7 with the result that airline orders would be cancelled.

"I feel that current public speculations about the aircraft industry should be re-examined in the cold light of fact of the mounting cancellations of orders both military and commercial and existence in domestic and foreign markets of a large surplus of government airplanes of all types," Douglas said in a prepared statement.

He said that this was a factual picture of the Douglas Co., as of Sept. 14:

"On Sept. 1, 1944, our military backlog was \$1,825,000,000. By Dec. 15, 1945, this military backlog is expected to reach the figure of \$50,000,000, largely in experimental and not production orders. It should be pointed out that profit margins on all experimental work is very small, if any . . ."

Douglas said that when the cancellation on the DC-7 commercial order comes "it will still further reduce by \$39,000,000 our current commercial backlog."

Some Compensation Seen

"Existence of the large surplus of military transport and public announcement by the government that it intends to release soon for commercial use through sale or lease more than 200 aircraft of this type already resulted in definite cancellation by airlines of 40 four-engine transports valued at \$15,400,000," he said. "In addition to this, cancellation of 32 similar airplanes are indicated or in progress, for an overall total in this model of \$27,720,000."

"Partially compensating for this loss several airlines have placed orders for C-54 type commercial transports to be built on existing production lines and others indicated plans to send to our plant for factory reconversion to commercial use, military C-54 airplanes purchased or leased from the government. How many of these new airplanes can be built and what the reconversion business will mean in terms of dollars and jobs at this time is impossible to predict."

"Also on the gain side of the post-war commercial business, and of importance to the future of the company should also be listed an increase in original orders for the DC-6 type of transport in the amount of \$11,900,000. The final overall effect on our post-war business and jobs of these rapidly changing factors remains undetermined so long as present conditions exist."

"In my opinion neither this company nor our industry can safely and realistically make any post-war plans or have any reasonable expectations of being able to carry out any previous commitments without regard to national policies and economic developments such as surplus disposal and future military procurement which are changing almost daily and are



AIA's Export Committee—The Export Committee of Aircraft Industries Association met recently at Seaview Country Club, Absecon, N. J., to discuss development of foreign trade ideas and mutual export problems. Irving H. Taylor, committee chairman, and John H. Payne, AIA export service manager, are shown at left. Others in the group are: (first row, left to right), C. T. Zoaral, Bendix Aviation; J. T. Geutling, Jr., AIA; Robert B. Lea, Sperry Gyroscope Co.; Alfredo de los Rios, Fairchild; Gunnar Erikson, Fairchild; Stanley W. Bedell, Sperry; Wood T. Henry, Sperry; Robert Kinkead, Boeing Aircraft; Wayne W. Parrish, American Aviation Publications; (second row, left to right) Bert C. Goss, AIA; J. Maurice, Consolidated Vultee; Fred B. Collins, Boeing; Robinson Murray, Irwin Vladimir & Co.; Charles I. Morton, Curtiss-Wright; W. F. Goulding, Curtiss-Wright; E. K. Hubbard, United Aircraft; R. J. McGivney, Consolidated Vultee; H. W. Flickinger, Republic Aircraft; (third row) A. R. Christie, United Aircraft.

subject to national legislative consideration, as well as other national and international developments."

Meantime, it was disclosed that only the consummation of an agreement with the government on the use of tooling is holding up the start of production on C-54Es for the airlines by Douglas at its Santa Monica plant. Prepared to begin production immediately after the tooling is released, Douglas officials are hopeful that negotiations now in progress may be accomplished shortly in order to keep its Santa Monica plant going without further layoffs.

Douglas has airline orders both for C-54Es and for the modification of C-54s obtained from surplus disposals. It has 15,000 employees at Santa Monica working on the conclusion of its curtailed C-54 Army contract. Only a few of these planes still are to be assembled and this work will end by Nov. 1. Unless an agreement on tooling is reached before this date and Douglas can switch over to commercial production for the airlines, the greater number of the 15,000 employees will have to be laid off.

Lear Transfers Departments

William P. Lear, president of Lear, Inc., announces the transfer to Grand Rapids, Mich., of his company's executive, sales, engineering, procurement and accounting departments. The general office's new address is 110 Ionia Ave., Grand Rapids 2, Mich. Production will continue at Lear's plants in Grand Rapids and in Piqua, O.

Navy Contract Cutback Totals Three Billions

Navy cutbacks by the Bureau of Aeronautics total \$3,550,432,000, according to Assistant Secretary H. Struve Hensel. Overall contracts terminated thus far constitute about 69% of the dollar value of contracts outstanding on V-J Day.

Chance Vought Aircraft Division of United Aircraft Corp., producer of the Corsair, was cut back \$232,730,000. Consolidated Vultee, producing for the Navy at San Diego, New Orleans, and Allentown, had contracts terminated totaling \$128,897,000. Curtiss-Wright and Wright Aeronautical Corp. terminations totaled \$188,355,000. Douglas Aircraft Co.: \$25,356,000. Eastern Aircraft Division of General Motors, \$293,884,000. Goodyear Aircraft Corp.: \$188,251,000. Grumman Aircraft Engineering Corp.: \$421,032,000. Lockheed Aircraft Corp.: \$68,216,000. Glenn L. Martin Co.: \$193,650,000. Ryan Aeronautical Co.: \$14,178,000. Canadian Car & Foundry and Fairchild of Montreal, building versions of the Curtiss Helldiver, were cut back a total of \$13,676,000. Pratt & Whitney, Kansas City, Mo.: \$219,060,000. Pratt & Whitney, East Hartford, Conn.: \$327,323,000. Nash-Kelvinator (Pratt & Whitney engines): \$7,848,000. Hamilton Standard (propellers): \$78,690,000.

Succeeds Father

Evans Products Company's new president is Edward S. Evans, Jr., who succeeds his father, the late E. S. Evans. He has been executive v.p. of the company for the past ten years.

Lycoming Experimenting With New High-Horsepower Engine

Liquid-Cooled XH-2470 Design Has 24 Cylinders in 4 Rows

LYCOMING Division—The Aviation Corp. has entered the high horsepower field with the development of an experimental 2,300 hp liquid cooled engine designated as the XH-2470. The new power plant has 25 cylinders arranged in four rows of six cylinders each, two rows on the top and two rows on the bottom of the crankcase, thus making an "H" formation. There are two six-throw crankshafts, one for each of the vertically opposed rows of cylinders. The crankcase is composed of two sections divided longitudinally in a vertical plane passing through the center of the engine.

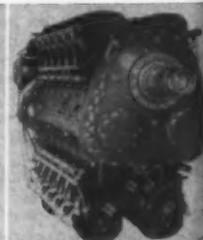
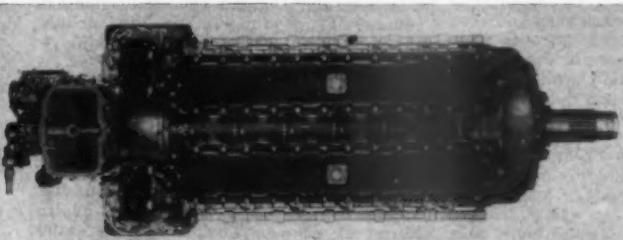
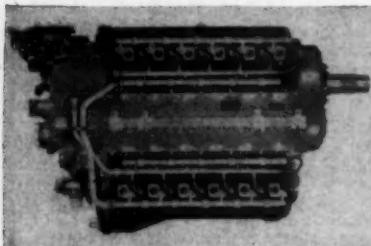
Cylinders on the XH-2470 are of individual construction making for ease of maintenance, and are secured to the crankcase by stud and nut combinations. Each cylinder consists of a steel barrel screwed and shrunk onto an aluminum head with a coolant jacket shrunk in place on the barrel. There is one exhaust and one intake valve to a cylinder, the valves being operated by four crankshafts, one for each row of cylinders, with the action of the cams being transmitted directly to the valves by rocker arms.

Pistons are of full skirt type machined from aluminum alloy forgings and have three compression and one oil control ring. The piston pin is of the full floating type, and connecting rods are of forged and blade type. Bore is 5.25 in., stroke 4.75 in., and piston displacements 2468 cu. in. The compression ratio is 6.4:1.

The XH-2470 has a dry weight of approximately 2,400 lbs. or slightly more than one pound per take-off horsepower. It is very compact in design, having an overall width of 30.54 in., height of 50.16 in. and length of 89.8 in., and lends itself readily to streamlining; yet is extremely accessible to permit easy maintenance and efficient service. Both supercharger and accessory drives are located at the rear of the engine.

The propeller shaft is centrally located above the axis of the crankshafts and is driven by a spur type reduction gear.

In Army tests the Lycoming "H" has been rated at 2,300 take-off horsepower at 3,300 rpm at sea level, and 2,000 normal rated horsepower at 3,100 rpm at from sea level to 3,500 ft. Use at present has been limited to experimental aircraft.

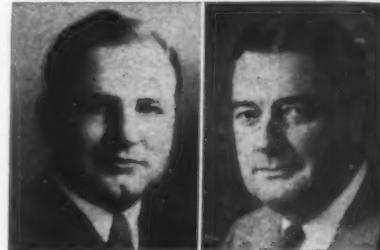


Lycoming's Big 'H'—Shown here are top, right side and three-quarter front views of a new 24-cylinder, 'H' type, liquid-cooled engine developed by Lycoming Division-The Aviation Corp. With a take-off rating of 2,300 hp and a normal rating of 2,000 hp, the new power plant known as the XH-2470 is extremely compact but very accessible, permitting both streamlining and efficient service. Frontal area is only about 30 x 50 inches.

Curtiss-Wright Moves To Consolidate Plants

G. W. Vaughan, president of Curtiss-Wright Corp., announced last fortnight plans for further consolidation of manufacturing facilities in the company's airplane division, and realignment of certain key executives.

First of these moves called for the closing of the airplane division plants at Buffalo with completion of current commercial contracts for the CW-20 Commando transport being produced, and the transfer of headquarters, such key personnel and manufacturing facilities as are necessary to the Columbus, O., plants



Earle

Wright

early next year, provided that proper arrangement can be made with the Defense Plant Corp. for re-utilization of that facility.

Robert L. Earle, vice president, has been placed in charge of the airplane division as well as the propeller division of which he has been General Manager since 1938.

Burdette S. Wright, vice president in charge of the airplane division in 1940, will move from Buffalo to the company headquarters office in New York to assist in reconversion.

G. M. Williams, senior vice president of Curtiss-Wright and executive vice president of Wright Aeronautical Corp., came with the organization on a wartime basis in 1943. He has been on a leave of absence as president of the Russell Manufacturing Co. since December 1941, and will return to the company about Dec. 1, 1945.

F. H. Harrison, vice president, has been named general manager of the airplane division by Earle. Harrison was borrowed from the International Harvester Corp. for the wartime period and has played an important part in the airplane production record with his cooperation during that period.

Full Detail on Boeing 377 Shows Low Operating Cost

Five Interior Arrangements Provide Greater Utility

FULL details on the Model 377 Stratocruiser, commercial transport version of the B-29 Superfortress and C-97 military transport, which were released last fortnight by Boeing Aircraft Co., together with interior photographs of the full scale mock-up, reveal that direct operating costs for the standard passenger version will be less than 10c a ton mile for all ranges from 300-2,300 mi. at a 130,000-lb. maximum gross take-off weight, and from 300-3,100 mi. at a 140,000-lb. maximum take-off weight using external fuel tanks.

These computations are based on no headwind, cruising at 25,000 ft. and an 850-gal. fuel reserve. Maximum cruising power is assumed for trip lengths up to 1,850 mi., and 100 per cent maximum range speed for longer distances. The direct flying cost curve starts at about 9c per ton mile for a 300-mi. range and drops to 8c a ton mile at a 1,300-mi. range. At the 130,000 lb. take-off weight it begins to rise slightly at a 1,700-mi. range, reaching approximately 10c a ton mile at a 2,300-mi. range, and approximately 20c a ton mile at a 3,600 mi. range. At 140,000 lb. take-off weight, costs remain under 8c a ton mile for ranges up to 2,700 mi., rise to 10c a ton mile at a 3,150-mi. range and to 15c a ton mile at a 4,000 mi. range.

Maximum payload in still air including a take-off, climb and maneuver allowance and an 850-gal. fuel reserve is 30,-

000 lbs. for ranges up to 500 mi. (120,000 lb. take-off wt.), 19,200 lbs. for 2,500 mi. (130,000 lb. take-off wt.) and 11,650 lbs. for 4,200 mi. (140,000-lb. take-off wt. and 1,220 gal. external tankage).

The model 377 is a low-midwing monoplane with a double deck fuselage which is externally identical to the C-97 military transport, but will be powered by four Pratt & Whitney R-4, 360 Wasp Major engines driving four-bladed, 16-ft. 7-in. diameter, Hamilton Standard super-hydromatic propellers. The Wasp Major engine is expected to develop at least 3,500 hp for take-off and 2,800 hp meto as compared to 2,500 take-off hp for the Wright R-3350 used in the C-97. There is a possibility that Allison 3420 liquid cooled engines, likewise expected to develop 3,500 hp each for take-off will be offered as an alternative power plant installation.

The Stratocruiser has a span of 141 ft. 3 in.; length of 110 ft. 4 in. and height of 33 ft. 3 in. Interior cabin width to the inside of the lining is 10 ft. 4.5 in. Main entrance doors have a height of 9 ft. 10 in., forward cargo door 4 ft. 11 in., and rear cargo door 4 ft. 5 in. Specification take-off weight is 130,000 lbs., maximum take-off weight 140,000 lbs., structural landing weight 121,700 lbs. This permits a useful load of 55,890 lbs. at specification take-off weight, and nearly 65,890 lbs. at maximum take-off weight. Fuel capacity is 7,055 gal. in built-in tanks, with provision for an additional 1,200 gal. in external tanks.

The full cantilever, two-spar, stressed metal covering wing incorporates the

Boeing 117 airfoil, and has an area of 1,720 sq. ft. and an aspect ratio of 11.58. Wing loading at 130,000 lbs. is appr. 75.6 lbs./sq. ft. and take-off power loading 8.13 lbs./hp. Flaps are of Fowler type electrically operated. Empennage span is 43 ft. and all movable surfaces are aerodynamically and mass balanced. Both the wing and fixed tail surfaces have built-in anti-icing provisions.

The fuselage is of semi-monocoque construction designed for pressurization with a maximum width of 132 in., maximum depth of 15 ft. 2.5 in., and ground clearance of 22.5 in.

Landing gear is of fully retractible tricycle type, electrically actuated and dual wheeled throughout. Fifty-six inch tires are used on the main gear, and 36-in. tires on the nose gear. Main gear tread is 28 ft. 5.6 in. and wheelbase 36 ft. 1.16 in. Minimum radius is approximately 29 ft.

Has Different Arrangements

The Stratocruiser will be offered with five different interior arrangements. The standard version (Model 377-10-19) will seat 67-passengers in double rows of reclining chairs in the 4,300 cu. ft. main passenger compartment, and 14 passengers in the 500 cu. ft. lower deck passenger lounge. There is a 225 cu. ft. men's lounge, 225 cu. ft. ladies lounge, 170 cu. ft. galley, 680 cu. ft. forward cargo hold (lower deck) and 220 cu. ft. rear cargo hold (lower deck). The cockpit has a volume of 505 cu. ft.

A second version, known as the commuter arrangement, seats 100 passengers in the main cabin in rows of alternate double and triple seats. Lounge and cargo compartments are the same as in the standard version.

A deluxe sleeper arrangement carries 61 passengers by day and 28 passengers in berths, 5 in seats, at night in the main cabin, plus 14 seated in the lower deck lounge; while a combined passenger cargo version seats 71 passengers on the upper deck and provides 1,400 cu. ft. of cargo space on the lower deck. The all-cargo version provides 5,720 cu. ft. of cargo space, and can carry a maximum payload of 39,000 lbs.

The entire cabin is supercharged and will maintain sea level or take-off level cabin pressure conditions at any altitude up to 15,000 ft., while at 25,000 ft. the cabin equivalent altitude is only 6,000 ft. Maximum rate of change for cabin pressure altitude may be limited to 200 ft./min. Galley conveniences provided the steward and stewardess include a control panel containing master switches for all interior lighting, and an interphone connecting with all members of the crew.

Republic Appoints Mabry To Important Sales Job

Preston H. Mabry has been appointed assistant sales manager of Republic Aviation Corporation's personal plane division. Prior to his present appointment, Mabry was assistant director of market research, a service supervisor, and sales representative of the personal plane division.

Cabin arrangement of Boeing 377

RETRIEVER PLANE

Ship-of-all-work

War experience has proved American-made planes outstanding in many respects, but it is in ruggedness that our aircraft lead the world. Near the top for toughness among U.S. ships is the little-known J2F-6, Columbia Aircraft's aptly-named "Durable Duck."

Employed for scouting, reconnaissance, photographic observation, plasma delivery, rescue work, and numerous other chores, the Duck is ship-of-all-work. Because it is versatile, durable, and able to land and take off where more glamorous planes can't, it is in rescue work that the Duck wins its laurels.

70 Yards for Landing

One Duck landed in smashing seas,



taxied nine miles with waves breaking over its top wing, then took off without a sputter. Another landed in a reef-rimmed 70-yard inlet, took off cross-wind inside 200 feet, despite a severe pounding.

Best example of Duck durability is the J2F-6 that was being towed by a



surface ship in high seas. The tow-line parted twice, waves filled the cockpit, submerging the plane's lower wing. Further towing was impossible, so the Duck was abandoned.

Next day the Duck was still afloat, had to be sunk by shells from a warship—two hits were required to make it go down!

Snatching Wounded from Japs

Ducks have sidled in to "impossible" landings in Jap territory, while escort fighters circled overhead. Often, the Duck took the air again with a full load of wounded, sometimes with an overload lashed to the wings.



No thing of beauty on the ground, the amphibious Duck becomes oddly impressive in flight. Over both oceans, it has functioned effectively as a scout plane, mercy ship and dependable beast of burden.

It was a Duck that found the Nazi weather station in Greenland. Another Duck, operating out of Henderson Field, Guadalcanal, picked no less than twenty downed pilots from the sea.



For its many rescues, word came from the Pacific that the ungainly but rugged amphibian had earned a new nickname, "The Beloved Duck."

Justly proud of the gallant performance of the Duck, Columbia Aircraft workers are now engaged, under Navy supervision, in building a new amphibian—larger, with increased range and greater load capacity. The same men and women who built the sturdy Duck are building the new and even more versatile plane. And the same craftsmanship which has made the Duck a by-word for ruggedness and reliability will distinguish Columbia's new workhorse of the air, Columbia Aircraft Corporation, Valley Stream, N. Y.

Manufacturing Personnel



Strohmeier

Wright

Gustafson

Alexander M. Wright, who has been manager of the Chandler-Evans Dayton plant since its construction in 1942, has been appointed General Manager at the parent plant to which Chandler-Evans Corp. is moving, while Floyd C. Gustafson gets the post of Sales Manager of the corporation. E. A. Hoose, Jr. has resigned as account executive on Consolidated Vultee for Hill and Knowlton since he plans to establish his own public relations firm.

William D. Strohmeier, former sales promotion manager for Piper Aircraft Corp., and the Hawthorne School of Aeronautics, has joined Charles H. Gale Associates, New York public relations counsel, to handle a number of aviation accounts.

Gabriel R. Vogliotti, formerly research director for Pan-American Airways System, has been appointed Director of Business Research, a newly created position in the Jordanoff Aviation Corp. which will also take care of advertising and public relations.

Philip Hartmann, recently discharged from the AAF, has become Manager of the New York office of the Aircraft Manufacturers Council succeeding Ken Ellington, who since last fall has been in charge of organizing the office and establishing the AIA's procedure for regional meetings on the East Coast.

H. M. Porter, assistant director of industrial relations for Lockheed Aircraft, has been appointed an assistant in administration.

W. V. Henley, widely known in the aviation technical field, has been made assistant manager of the Aviation Division of Standard of California.

Howard de Franceaux, recently resigned sales manager of the Rochester Can Co., announces the opening of his Washington office and service bureau for manufacturers to handle reconversion pricing, contract terminations, renegotiations and procurements.

R. Randall Irwin, Director of Industrial Relations Service, Aircraft Industries Association, has been named substitute Industry Member of the National War Labor Board, where he will also continue to serve part time on the National Airframe Panel.

James A. Wales, Jr. has retired as assistant to the general manager in charge of public relations of Fairchild Aircraft Division, Hagerstown, Md.

W. D. Holman is the new material chief of Consolidated Vultee Aircraft Corp., at Fort Worth and will have the job of obtaining materials for production of Convair's B-3 bomber, the largest ever planned.

Leroy D. Kiley, who has been associated with Bendix for the past four years, will assume immediate direction in Baltimore of the reconversion program and operations as general manager of the Friez Instrument division of Bendix Aviation Corp.



Holman

Vogliotti

Kiley

Fairchild Camera Reports Sales of \$11,926,000

SEC Reports Show Backlog Of Orders for 3 Companies

Net sales of \$11,926,000 for the six months ending June 30, 1945, have been reported by the Fairchild Camera and Instrument Corp., as compared with a figure of \$22,095,000 for the corresponding period in 1944. For the same period, net profit before taxes in 1945 was \$972,143 as against \$2,502,268 in 1944. Net profit after taxes in 1945 was \$276,247 as compared to 1944's \$695,054. These figures are subject to year-end and auditors' adjustments and to final renegotiation proceedings.

Unfilled orders as of June 30, 1945, were \$28,042,000 as compared to \$36,343,000 on June 30, 1944. After contract terminations with the war's end, Fairchild reports, as of Sept. 10, unfilled orders of approximately \$8,656,000.

"The terminations received", says J. S. Osgbury, president, "affected production departments in such measure that it was necessary to close down all such departments, except engineering and experimental, to give us an opportunity of inventorying the termination work in process, recording, assembling and storing it for Government inspection, and preparing the plants for other available production. Production was resumed in a limited way on Sept. 10 and it is anticipated will be gradually increased from now on as conditions justify."

War Backlogs Shown

Current war business and war backlog of Northrop Aircraft, and Grumman Aircraft Engineering Corp. were disclosed in the third of a new series of reports released by the Securities and Exchange Commission.

Northrup, from Aug. 1, 1944, to July 31, 1945, had estimated total sales of \$87,000,000; estimated war sales of \$86,920,000; unfilled war contracts—beginning of period: \$83,592,000; end of period: \$112,703,000.

Grumman, from April 1, 1945, to June 30, 1945, showed approximate figures of \$74,000,000 for total sales; \$74,000,000 for war sales; \$253,000,000 for beginning of period; and \$370,000,000 for end of period.

Boeing Aircraft Company reported to the Securities and Exchange Commission war-contract terminations of \$120,000,000.

Sperry Has Unfilled Orders of 80 Millions on Contracts

Sperry Corp. reports unfilled orders amounting to about \$80,000,000 as compared to \$230,000,000 on July 31, 1945. Most of these orders are under war contracts and may be further cut back. Shipments for the first six months of this year were valued at \$187,000,000, 11% under 1944 and 19% under 1943. Employment is under 20,000, as against 36,000 on June 30, 1945, and 56,000 in May, 1943.

Continuing to work with the Army and Navy on military instruments, Sperry will intensify its research in hydraulics and electronics. Sperry also recently acquired half interest in Wright's Automatic Machinery Company of Durham, N. C., which makes package wrapping machinery.

Liquidation Board Reports \$167,000 in Sales in Month

Seven surplus airplanes, a glider, and parts of a B-17, all located overseas, were sold or leased by the Army-Navy Liquidation Commissioner's Aircraft Division during its first month of operation, according to Commissioner Thomas B. McCabe. Total sales price was \$167,359.11.

China National Aviation Corp. purchased two C-53's in Calcutta for \$120,000; two others were leased to Danish Airlines at Cairo and Casablanca for \$16,000. Other purchases included an R30-2 aircraft located in England, by B. E. Smith in New York for Sidney Cotton of England, for \$20,000; a TG-5 glider, by E. W. Loane, of Calcutta, for \$351.05; and B-17 parts by the ABA Airlines in Stockholm for \$5,507.06. A wrecked C-47 was sold to the Colombian government for \$5,500. All sales were made for American dollars.

Meantime it was learned through RFC sources that 2,956 primary trainers were sold from April 6 to Sept. 14 in the U. S. under surplus procedure. The Government received \$3,163,682 for these planes.

More than 100 Taylorcraft gliders have been sold in package lots. These gliders are the basic Taylorcraft airplane, with engine removed and nose extended to carry an extra passenger. Engines are sold with the planes, the nose can be removed, an engine installed in the re-conversion to a two-place aircraft. The price on the gliders is \$350, with engine prices ranging from \$183 to \$458.

RFC Offers 14 Former War Plants For Sale or Lease

Fourteen plants formerly engaged in wartime production of aircraft or aircraft parts are being offered for sale or lease by the Reconstruction Finance Corp.

They include plants of: Schweizer Aircraft Corp. at Elmira, N. Y.; Republic Aviation Corp. at Farmingdale, N. Y.; Continental Aviation and Engineering Company at Muskegon, Mich.; Sperry Gyroscope Company, Inc., at Great Neck, N. Y.; two Jack & Heinz plants in Bedford, O.; Interstate Aircraft and Engineering Corp. at DeKalb, Ill.; Bendix Aviation Corp., Sidney, N. Y.; Bell Aircraft Corp. at Burlington, Vt., and Bell Aircraft Corp. at Buffalo, N. Y.; Aviation Corp. at Williamsport, Pa.; two plants of Bellanca Aircraft Corp. at New Castle, Del.; American Propeller Corp. at Toledo, O.

All American Sets Capital Stock At 1 Million Shares

Stockholders of All American Aviation at their annual meeting Sept. 18 voted to fix capital stock to the company at 1,000,000 shares of Common Stock having a par value of \$1 per share and reelected the company's Board of eight Directors.

The directors are: Halsey R. Bazley; W. Sam Carpenter, III; Frank M. Donohue; Mrs. Richard C. du Pont; and Charles W. Wendt of Wilmington; and Arthur P. Davis and David F. Rawson of New York; and Beverly E. Howard of Orangeburg, S. C.

WHITING MODEL B3 3-TON AERO HOIST

The Whiting Model B3 3-Ton Aero Hoist, engineered for use in removing and installing unusually heavy aircraft engines and parts, provides a lift of twenty feet and has a rated capacity of three tons. Collapsible construction simplifies shipping.

A unique, streamlined design eliminates all unnecessary superstructures in the aero hoist, reduces the possibility of damage to engine parts to a minimum, provides maximum accessibility from all sides. Notable construction features are the dual work platform eleven feet from the floor, riser steps, and open leg base to accommodate large engine stands or other equipment. Write for information.

Main Office and Plant: 15647 Lathrop Ave., Harvey, Ill. Western Office: 6381 Hollywood Blvd., Los Angeles, Calif. Canadian Subsidiary: Whiting Corporation (Canada), Ltd., Toronto, Ontario. Branch Offices in New York, Chicago, Buffalo, Birmingham, Pittsburgh, Detroit, Cincinnati, St. Louis, and Washington, D. C.

WHITING CORPORATION

Aviation
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Over - the - Counter Securities

(Courtesy Merrill Lynch, Pierce, Fenner & Beane)

	September 15		September 22	
	Bid	Ask	Bid	Ask
AIRLINES				
All American Aviation	10	10 $\frac{1}{2}$	10	10 $\frac{1}{2}$
American Airlines Pfd.	Called @ 106	1/15	60	63
American Export Airlines	58	61	23 sale	
Braniff	21 sale		25 $\frac{1}{2}$	26 $\frac{1}{4}$
Chicago & Southern common	26	26 $\frac{1}{2}$	17 $\frac{1}{4}$ Bid	
Chicago & Southern warrants	16 Bid		17 $\frac{1}{4}$	
Continental Airlines	16	16 $\frac{1}{4}$	17	18
Delta Air	39 $\frac{1}{2}$	40 $\frac{1}{2}$	40 $\frac{1}{4}$	41
Inland Airways	7	8	7	8
Mid Continent	16 $\frac{1}{2}$	17	16 $\frac{1}{2}$	17
National Airlines	22 $\frac{1}{2}$ sale		24 sale	
Northeast Airlines	15 sale		15 $\frac{1}{2}$ sale	
MANUFACTURERS				
Aeronca com.	4 $\frac{1}{2}$	5 $\frac{1}{4}$	4 $\frac{1}{2}$	5 $\frac{1}{2}$
Air Associates	12 $\frac{1}{2}$	13 $\frac{1}{2}$	12	13
Aircraft & Diesel	1 $\frac{3}{4}$	2 3/16	1 $\frac{3}{4}$	2
Aireon Mfg.	13 $\frac{1}{4}$	14 $\frac{1}{2}$	14	14 $\frac{1}{2}$
Airplane & Marine	8 $\frac{1}{4}$	8 $\frac{1}{2}$	12 $\frac{1}{2}$	12 $\frac{1}{2}$
Central Airports	.....	.....	1 Bid	.....
Columbia Aircraft	3 $\frac{1}{4}$	1	3 $\frac{1}{4}$	1 $\frac{1}{2}$
Continental Aviation	2 $\frac{1}{2}$	2 $\frac{1}{2}$	2 $\frac{1}{2}$	2 $\frac{1}{2}$
Delaware Aircraft Pfd.	.....	.....	.....	.....
General Aviation Equipment	2 $\frac{1}{2}$	2 $\frac{1}{2}$	2 $\frac{1}{2}$	3 $\frac{1}{2}$
Globe Aircraft	2 $\frac{1}{4}$	3	2 $\frac{1}{2}$	3 $\frac{1}{4}$
Harlow Aircraft	50c	60c	50c	60c
Harvill Corp. common	2 $\frac{1}{2}$	2 $\frac{1}{2}$	2 $\frac{1}{2}$	2 $\frac{1}{2}$
Interstate Aircraft & Engine	9 $\frac{1}{2}$	10 $\frac{1}{4}$	11	11 $\frac{1}{2}$
Jacobs Aircraft	5	5 $\frac{1}{2}$	offd @	5 $\frac{1}{2}$
Kellett Aircraft	2	2 $\frac{1}{4}$	2 $\frac{1}{2}$	2 $\frac{1}{2}$
Kinner Motors	1.50	1.60	1.50	1.60
Liberty Aircraft common	13 $\frac{1}{2}$	14 $\frac{1}{2}$	13 $\frac{1}{2}$	14
Luscombe	1 $\frac{1}{2}$	2 $\frac{1}{4}$	2 $\frac{1}{2}$	2 $\frac{1}{2}$
Menasco Mfg.	2 $\frac{1}{2}$	2 $\frac{1}{2}$	3 $\frac{1}{2}$	4
Northrop Aircraft common	8 $\frac{1}{2}$ sale		9 $\frac{1}{2}$ sale	
*Pacific Airmotive Corp.	4	4 $\frac{3}{4}$	4 $\frac{1}{4}$	4 $\frac{1}{2}$
Piper Aircraft common	5 $\frac{1}{2}$ sale		5 $\frac{1}{2}$ sale	
Piper Aircraft pfd.	57 bid		55 bid	
Rohr Aircraft	11 bid		11 $\frac{1}{2}$	12 $\frac{1}{2}$
Standard Aircraft Products	55c	70c	50c	65c
Taylorcraft common	3 $\frac{1}{4}$	3 $\frac{1}{4}$	3 $\frac{1}{2}$	4 $\frac{1}{2}$
Taylorcraft Pfd.	.....	.....	.....	.....
Timm	1.40	1.50	1.35	1.45
United Aircraft Products Pfd.	19 $\frac{1}{2}$	20 $\frac{1}{2}$	20	20 $\frac{1}{2}$

* Formerly Airplane Mfg. & Supply Corp.; name changed March 1945.

Classified

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AIRLINE—TWA is interested in qualified Flight Engineers meeting the following basic requirements: Age 21-35; CAA Mechanics' Certificate with Aircraft and Engine Ratings; Experience: 4 years airline or equivalent; or college training with a major in Mechanical Science with 1 year aircraft maintenance. Employment would be as a member of flight crew on regular scheduled airline operations. Apply: Transcontinental & Western Air, Inc., 111 W. 10th Street, Kansas City, Missouri.

Colonial Reports Profit

Net operating profits for three months ended Aug. 31, after depreciation and other charges, but before taxes, were reported for Colonial Airlines, Inc., as aggregating \$172,123. President Sigmund Janas stated the airline's August business, figured on the same basis, showed record profits of \$80,000.

National Airlines, Inc., reported a net income of \$35,280 for July, 1945, as compared to a net income of \$1,227 for July, 1944.

★ ★

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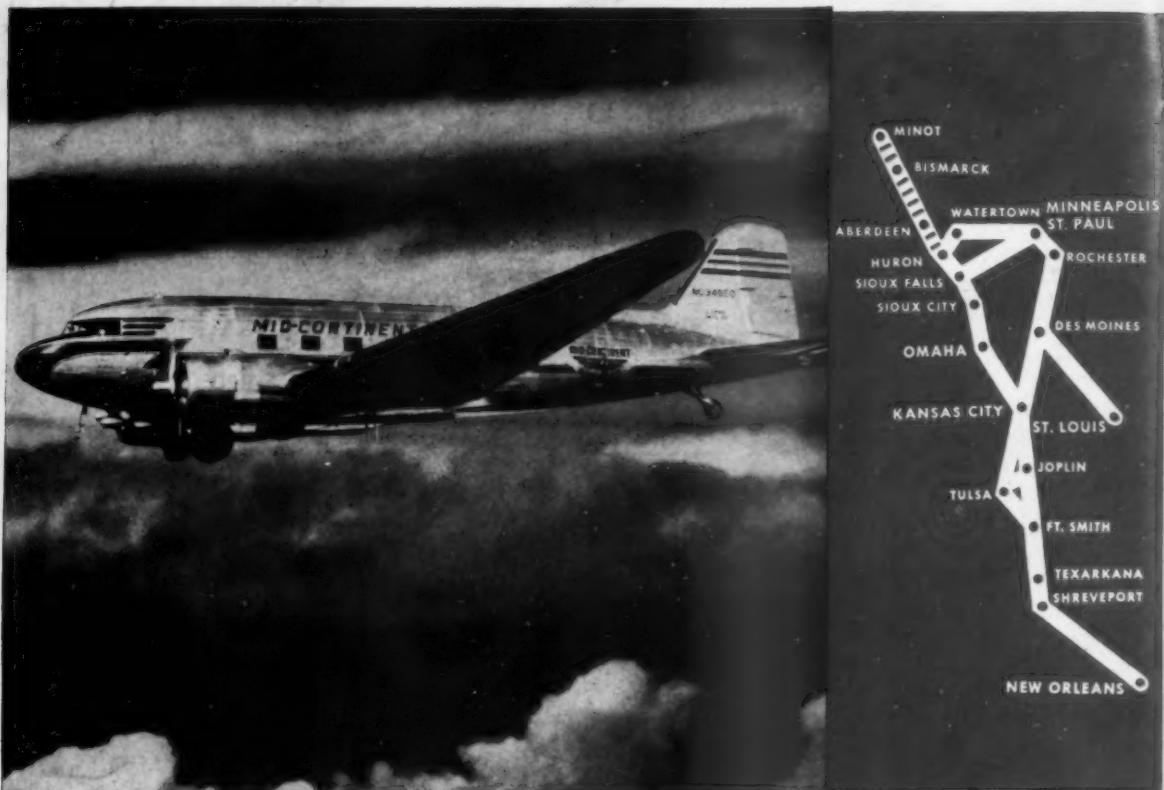
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MID-CONTINENT Airlines' recent extension of service to New Orleans now links the producing sections of the great middle-west with one of the world's busiest seaports. The route is flown with 21-passenger Douglas DC-3 airliners and will be of vast importance in the postwar era, as well as in the immediate development of America's might.

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3. Texaco rustproofing products meet *Ordnance specifications* for application on Government-owned equipment.
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